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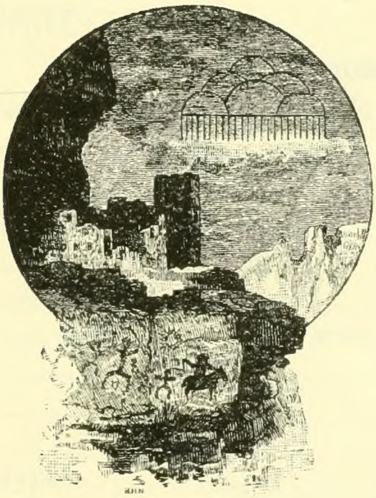
BUREAU OF AMERICAN ETHNOLOGY
BULLETIN 155

PREHISTORIC SETTLEMENT PATTERNS IN THE VIRÚ VALLEY, PERÚ

By GORDON R. WILLEY



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LETTER OF TRANSMITTAL

Smithsonian Institution,
Bureau of American Ethnology,
Washington, D. C., June 15, 1951.

Sir: I have the honor to transmit herewith a manuscript entitled "Prehistoric Settlement Patterns in the Virú Valley, Perú," by Gordon R. Willey, and to recommend that it be published as a bulletin of the Bureau of American Ethnology.

Very respectfully yours,

M. W. Stirling, *Director.*

Dr. Alexander Wetmore,
Secretary of the Smithsonian Institution.

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PREFACE

NATURE AND HISTORY OF THE RESEARCH

The Virú Valley program was a coordinated anthropological and geographical study of the human history of a single coastal valley in northern Perú. The detailed objectives of the Virú program have been described elsewhere (Willey, 1946 a); but, in major outline, there were three basic parts to the research: (1) archeology, or the study of human adaptation to the valley environment over a long period of time; (2) ethnology, or the investigation of the life and ways of the modern inhabitants of Virú; and (3) the natural valley and its environment. The present report is concerned with a part of the first research aim: the prehistory of the inhabitants of Virú.

In 1946, the archeology of the Virú Valley was known principally through the surveys of Kroeber (1930), Bennett (1939), and Larco Hoyle (1938–39). In addition, investigation in the Moche (Santa Catalina) and Chicama Valleys, to the north of Virú, served as a basis for comparisons. In view of the fact that there was an existing, if sketchy, archeological frame of reference, and because it is a relatively small valley, Virú was selected as a test unit for intensive regional study.

The Virú Valley plan was laid down by Drs. Wendell C. Bennett, of Yale University; William Duncan Strong, of Columbia University; Julian H. Steward, of the Institute of Social Anthropology of the Smithsonian Institution; and Gordon R. Willey, of the Bureau of American Ethnology of the Smithsonian Institution. This group became the Virú Committee of the Institute of Andean Research, and the project was planned, and eventually undertaken, under the auspices of the Institute. Although archeology and archeologists dominated the organizing committee, it was a fundamental aim of the participants to include geographical and modern ethnological or social anthropological disciplines. To this end, the program was expanded to include the cultural geographer, Dr. F. Webster McBryde, of the Institute of Social Anthropology, and the ethnologist, Dr. Allan R. Holmberg, of the same organization. Dr. Jorge C. Muelle, ethnologist with the Peruvian Instituto de Estudios Etnológicos, also joined the group to work with Dr. Holmberg. As plans matured, other archeologists interested in the Peruvian area were invited to enter the project, and, as a consequence, Mr. Junius Bird, of the American Museum of Natural History; Dr. James A. Ford, of Columbia University and the American Museum of Natural History; Dr. Clifford Evans, Jr., of Columbia University; and Mr. Donald Collier, of the Chicago Natural History Museum, became participants.

The organization of the program was such that each individual worked with a large degree of independence and was responsible to, and largely financed by, his own particular institution. Each man was expected to prepare his own research monograph, and these reports were to be published separately. Integration or cooperation was to be effected, however, in the common discussion of problems and in the free interchange of data in the field and afterward. To add to the over-all achievement of the program, additional funds were provided by special grant from the Viking Fund of New York City. This additional subsidy, named the "service fund," was administered by the Virú Committee and was used to pay for automotive transportation, rental for a common laboratory, air photographs and maps, and other features. These "services" were made available to all participants of the expedition.

In dividing the archeological problems, it was recognized that two basic field jobs needed intensive study. One was the relative chronology of the Valley and the other the distribution of archeological sites, by periods, throughout the Valley area. W. D. Strong, assisted by Clifford Evans, Jr., undertook the task of outlining ceramic periods of Virú; and James A. Ford selected the Valley survey or distributional problem. Wendell C. Bennett chose the intensive excavational study of a prominent group of ruins known to belong to a single period, the Gallinazo Group. As field work developed, Junius Bird joined forces to attack the sequential problem but with emphasis upon the very early, preceramic periods in Virú and Chicama. Donald Collier also worked on the problem of chronology but with special attention to the later prehistoric periods of the Valley's history. Strong and Evans had, meanwhile, centered their efforts on the early ceramic periods.

My own share in the archeology of Virú is, in a large sense, built upon the work of all of these colleagues. During our first "Virú discussions," in the summer of 1945, Julian H. Steward had suggested to me the lack of, and necessity for, settlement pattern studies in archeology. It was his belief that archeology could best place itself in the position of contributing to the interpretation of the nonmaterial and organizational aspects of prehistoric societies through a study of habitation and settlement types. It is, of course, self-evident that such a study would be impossible without the requisite background of archeological chronology and distributions. The settlement pattern analysis is, thus, a logical extension of the findings of Ford, Strong, Bennett, Collier, and Bird. Working as an individual, it would require several field seasons for any one archeologist to assemble and analyze sufficient basic information to approach the settlement pattern problem on the scale which I have been able to do in Virú.

Field work began in Virú in early April of 1946. At that time, Ford and I, working together, started our joint ceramic dating and settlement pattern survey. Simultaneously, Strong and Evans opened stratigraphic excavations. Two months later Bennett, Collier, and Bird had joined the expedition and were working on their respective projects. My own field studies continued until August, at which time Bennett, Strong, and Evans also terminated their work. Collier continued operations until November; and Ford and Bird worked elsewhere in the north coast area on projects not immediately concerned with Virú. The ethnological and geographical field work of Holmberg, Muelle, and McBryde ran throughout the latter months of 1946 and continued into 1947 and 1948.

Upon my return from Perú in the fall of 1946, I spent several months revising notes and working over field maps from Virú. In May of 1947, the paper, Virú Valley: Background and Problems, was written in conjunction with Ford. This paper was intended as a joint introduction to Ford's Virú ceramic survey and my settlement study. Later, it was determined that the reports would not be issued together, and so the introductory, Virú Valley: Background and Problems, was published with Ford's Cultural Dating of Prehistoric Sites in Virú Valley, Perú (Ford and Willey, 1949 a and b).

The writing of the present report was not begun until the fall of 1948. By that time I had received chronological data from my Virú colleagues which enabled me to assemble the sites which I had studied into a chronological scheme. Most of this information came from Ford, but Strong and Evans, Bennett, Collier, and Bird also made important contributions. A large part of the descriptive sections and most of the maps were prepared during 1948 and early 1949. I was forced to postpone further writing throughout most of 1950, but resumed in February of 1951. The work, as it now stands, was completed in the spring of that year.

To date (1951), two final reports have been published by the Virú participants: Ford's Cultural Dating of Prehistoric Sites in the Virú Valley, Perú (in Ford and Willey, 1949 a) and Bennett's The Gallinazo Group, Virú Valley, Perú (1950). The monograph by Strong and Evans on the ceramic stratigraphy of the early periods of Virú is in press, and the studies of Collier and Bird are in preparation, as are those on the modern ethnology and geography of the Valley by Holmberg, Muelle, and McBryde. In addition, several short papers have already been published as a result of the Virú program (Bennett, 1947; Willey, 1946 a, 1946 b, 1947; Rowe, 1948; Strong, 1947); and both the Chiclín Conference on Peruvian Archaeology of 1946 (Willey, 1946 b) and the Viking Fund symposium, A Reappraisal of Peruvian Archaeology (Bennett, ed., 1948), were, in part, the outgrowth of the Virú research. The tentative plans call for an over-all Virú summarization and interpretation following the publication of the individual monographs.

ACKNOWLEDGMENTS

As the Virú Valley project was organized and carried out while I was a member of the staff of the Bureau of American Ethnology, Smithsonian Institution, I am, above all others, indebted to my former chiefs at the Smithsonian, Dr. Alexander Wetmore, Secretary; Dr. J. E. Graf, Assistant Secretary; and Dr. M. W. Stirling, Director of the Bureau of American Ethnology. Their interest in the project from its inception made possible my participation. The generous aid of the Viking Fund, and the interest of Dr. Paul Fejos, Director of the Fund, also contributed, materially, to all of the Virú studies and, particularly, to mine. Finally, as the report has been completed and assembled at the Peabody Museum, Harvard University, I am grateful to Dr. J. O. Brew, Director of the Peabody, for his willing support and encouragement in allowing me to continue a research undertaking begun under other auspices.

Among my scientific colleagues I wish, particularly, to thank Ford, who not only provided me with the indispensable chronological information on the great majority of the Virú sites but who devised the system of epidiascopic projection of air photographs as an aid to mapping. Throughout the 1946 field season we worked in close cooperation. Bennett, Strong, Evans, Collier, and Bird also furnished valuable site-dating information. References to these data are given throughout the text of this report as well as in the Site Index (p. 423). The base map of Virú was prepared by McBryde and served as the "official" Virú map for all of us. A reduction and simplification of it has been reproduced in this monograph. For data on modern house types, economy, and population, I am in the debt of Holmberg and Muelle, who kindly offered me this material in advance of their own publication.

Although Julian Steward was not a participating field member of the Virú project, I would like to express my gratitude to him for his intellectual guidance in the matter of the settlement-pattern idea. Among other colleagues in the United States, I have consulted with, and been the recipient of valuable information from, Richard P. Schaedel, Paul Kosok, W. T. Sanders, J. East, and John H. Rowe.

In Perú, the ex-President of the Republic, the Honorable Luis Bustamante Rivera, and the ex-Minister of Public Instruction, the

Honorable Luis E. Valcárcel, expedited our work by special administrative order. Dr. Valcárcel, in his other role as Director of the Peruvian Instituto de Estudios Etnológicos, took a personal interest in our investigations and made possible the active collaboration of his assistant, Dr. Jorge C. Muelle. We are also indebted to the late Dr. Julio C. Tello and to the members of the Patronato de Arqueología del Perú for granting us our permits for work in the country. Our stay in Trujillo was made pleasant by the cordial hospitality of the Rector and Faculty of the University of La Libertad in that city. We wish, especially, to mention Dr. Hans Horkheimer and Sr. Maximo Diaz, both formerly associated with that institution. Also, our friends, Sr. and Sra. Enrique Jacobs, were most helpful in many ways.

During the field period, the members of the expedition were always welcome at the home of Sr. Rafael Larco Herrera and his sons, Sr. Rafael Larco Hoyle, Sr. Constante Larco Hoyle, and the late Sr. Javier Larco Hoyle, proprietors of the Hacienda Chiclín in the Chicama Valley. Rafael Larco Hoyle is director of one of the finest Peruvian museums in the world which he maintains at Chiclín. The collections, photographs, and notes of this museum were put at our disposal; and we benefited greatly from our discussions of Peruvian archeological problems with him. The Conference on Peruvian Archaeology at Chiclín (Willey, 1946 b) was held at his invitation.

In the Virú Valley our survey work was made easier through the friendly cooperation of Dr. Luis Arrese, Sr. Guillermo Roeder, and Sr. Victor Chavez, of Carmelo Hacienda, and Sr. Antonio de la Guerra, of Hacienda Tomaval.

In much of my site mapping I was assisted by my old and loyal Peruvian friend, chauffeur, and field assistant, Lucio Gamio Y. His patience and good humor are appreciated.

For specific technical aid or the loans of materials, I want to thank the following: Maximo Diaz, for drawings of the site V–92; the Servicio Aerofotográfico Nacional of the Peruvian Air Force at Las Palmas, for its efficient and prompt service in making aerial photographs and maps available to us; Rafael Larco Hoyle, for the loan of photographs of Peruvian pottery representations of architectural types; Clifford Evans, Jr., Donald Collier, Wendell Bennett, Webster McBryde, and Luis Arrese, for photographs of the Virú Valley and its archeological sites; Mr. David De Harport, for photographic assistance; the Science Department of the University of La Libertad, for the loan of an epidiascopic projector; and E. G. Schumacher, staff artist of the Bureau of American Ethnology, who prepared the maps and drawings for this report.

And, as always, my heartfelt thanks to my wife, Katharine W. Willey, who helped me with the manuscript and offered constant encouragement.

PLAN OF PRESENTATION

The Introduction of this report has been written in an attempt to present the reader with an archeological problem and the means of attack upon this problem. The section on *The Virú Valley: Environment and Inhabitants* gives the natural setting and brief sketches of human adaptation to this setting on the modern and historic levels. The archeological background pertinent to the study is also summarized here. The long section, *The Prehistoric Occupation of Virú*, contains the basic data, a description of the settlement features. These are all arranged in subsections dealing with successive chronological periods or cultural phases of the Valley's prehistory. Under each period heading there is a short ceramic definition of the period, a discussion of the distribution of sites of that period within the Valley, and a summary of site types. The summary is given before, rather than after, the individual site or feature descriptions so that the general reader may obtain a synopsis of site and settlement types without covering page after page of site detail. For those specifically interested, the sites are then treated under a series of classified headings pertaining to function and form. The next major division, *The Development of Virú Settlements: A Reconstruction*, is, in effect, the summary and conclusions to the settlement-pattern data. *Settlements and Society*, which follows, is an inferential essay upon population size and growth and upon sociopolitical organization as these are implied by the settlement findings. The final section, *The Virú Valley in Peruvian Prehistory*, is a comparative review of architectural forms and community types with reference to the total Peruvian area.

Gordon R. Willey.

Peabody Museum,
Harvard University.
May 14, 1951.

PREHISTORIC SETTLEMENT PATTERNS IN THE VIRÚ VALLEY, PERÚ

By Gordon R. Willey

INTRODUCTION

PURPOSE

The material remains of past civilizations are like shells beached by the retreating sea. The functioning organisms and the milieu in which they lived have vanished, leaving the dead and empty forms behind. An understanding of structure and function of ancient societies must be based upon these static molds which bear only the imprint of life. Of all of those aspects of man's prehistory which are available to the archeologist, perhaps the most profitable for such an understanding are settlement patterns.

The term "settlement patterns" is defined here as the way in which man disposed himself over the landscape on which he lived. It refers to dwellings, to their arrangement, and to the nature and disposition of other buildings pertaining to community life. These settlements reflect the natural environment, the level of technology on which the builders operated, and various institutions of social interaction and control which the culture maintained. Because settlement patterns are, to a large extent, directly shaped by widely held cultural needs, they offer a strategic starting point for the functional interpretation of archeological cultures.

The objectives of the Virú Valley settlement study are these: First, to describe a series of prehistoric sites with reference to geographic and chronologic position; second, to outline a developmental reconstruction of these prehistoric settlements with relation to function as well as sequence; third, to reconstruct cultural institutions insofar as these may be reflected in settlement configurations; and, fourth, to compare the settlement story of Virú with other regions of Perú.

This is an experimental work. The complexity of the problems which it envisages is such that full success is impossible at the present time. Accordingly, the results are offered with caution, and I have tried to call attention to various defects at all phases of presentation

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and on all levels of synthesis. Nevertheless, I have confidence that the settlement-pattern approach to a functional understanding of prehistoric cultures is a sound conception.

METHODS

SELECTING AND RECORDING THE DATA

The procedures in field and laboratory for the Virú Valley program have been described previously (Willey, 1946 a; Ford and Willey, 1949 b, pp. 18–19). The present section will paraphrase these earlier accounts but will also consider certain problems, methods, and techniques that have a specific bearing upon the settlement-pattern study.

The basic data for analysis and synthesis of prehistoric Virú settlements are the descriptive observations on archeological sites or other prehistoric works in the Valley. These data were compiled as notes, maps, and photographs during the course of a 4-month survey of the Valley. In this period 300 sites were recorded.[1] They were visited by Ford, who was conducting the ceramic survey (Ford, 1949, pp. 31–35),[2] myself, and two workmen (pl. 1, *top*). At each site notes and photographs were made, and at many of them a detailed map was prepared.

The mapping techniques were based upon aerial photography, and to describe the processes it is necessary to refer back to initial preparations which were made before entering the field. In embarking upon an investigation of settlements or site layouts it was obvious that maps would be crucial and would represent the greatest expenditure of time and effort in the field. If a large number of sites were surveyed, adequate instrument maps could not be prepared in the field time allowed. The problem, then, was to find a way of making a relatively accurate site map in a short time. I am indebted to Ford for a solution to this problem through the use of aerial photos and for his help in setting up the mapping laboratory at our Trujillo headquarters.

Before leaving Lima we had purchased air photographs of the Virú Valley. These had been prepared three to four years previously by the Peruvian Air Force and were assembled at the National Air Force Laboratories at Las Palmas near Lima. The prints were coordinated quadrangle mosaics, each of which encompassed 2 minutes of latitude and 3 minutes of longitude at a scale of 1:10,000. Twenty-two of these quadrangles, each measuring 23 by 16 inches, were needed to give adequate coverage of the cultivated valley bottoms and margins of Virú.

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[1] The total number of 315 resulted from additions made later by Collier and Bird.

[2] A ceramic collection was made at each site which I visited with Ford or for which Ford was responsible for the dating. At those sites excavated by other members of the Virú party, datings were provided by the respective excavators.

Study of the air photos showed numerous archeological sites in the Virú Valley, most of which were unreported; and this preliminary review proved to be most helpful in the field survey. Walls of dwelling sites, mounds, ancient roads, and canals were sharply defined; and, in many cases, features could be appreciated in the air photographs that would have been missed if we had passed over them without previous knowledge in a ground survey. It was this clarity of definition in the photos that suggested the particular mapping technique employed. Such a technique is feasible in country like the Peruvian coast where there are large areas without vegetation cover and where there are abundant structural remains visible on the surface.

Preparatory to going into the field, a site map was made from an air photograph with the aid of an epidiascopic[3] projector. This was done by placing one of the 1:10,000-scale air photographs in the epidiascope and projecting the image, in a dark room, onto a screen equipped with drawing paper. The section of the air photo so projected was a small rectangle about 3 by 2 inches. This was arranged to include the site, or sites, in question and the surrounding country. The enlarged projection was then traced in pencil, and this tracing formed the outline map which was then carried into the field to the site under consideration for detailed checking. The projection enlargement was a little over 15 diameters of the original on the air photograph. This particular ratio was accidental, being arrived at by adjusting for a convenient distance between epidiascope and screen. As the air photos were on the 1:10,000 scale, the projected tracings were at a scale of approximately 1:700. This scale was standardized and used throughout our Virú mapping work. All of the site maps illustrated in this report were made in accordance with it.

Field checking included chain measurements made on the ground (pl. 1, *center*). In many cases, there would be features which did not show to advantage on the air photos. These were then measured and plotted. Wall thickness, wall heights, doorways, subfloor cists, room banquettes, masonry and adobe types, and a multitude of other details not revealed in the air photographs were measured or recorded during our visits to the site. In addition, the relationship of one site to another, of sites to canals or cultivation plots, of sites and refuse heaps, and similar observations were noted during the ground survey, sometimes with reference to the air photos.

The sites, as surveyed, were numbered in a consecutive system with the prefix "V" (for Virú), hence the designations V–1, V–2, etc. As the survey progressed these sites were marked on a duplicate set of the large aerial photo quads which were carried with us in the "jeep" (pl. 1, *bottom*). Later, they were copied onto the second, and cleaner, set of quads which were kept in the laboratory and from which the projections were made. The sites were also entered on a master site map of the Valley. This map [4] was prepared by the geographer, F. W. McBryde, who worked from an aerial photograph taken at a 1:25,000 scale.

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[3] The proper name for a high-powered "magic lantern."

There are a number of comments to be set down concerning the site maps made with the help of the epidiascopic projections. It should be emphasized that they are not as accurate as a plane table or instrument map, but are more accurate than sketch maps or maps made only with compass and chain. There are a number of reasons for their lack of accuracy. We have mentioned the indistinctiveness of site features in the air photos. Besides this, there is the element of distortion in the photograph. I am not technically competent in aerial photography and cannot discuss the error factor with precision, but, in comparing ground and air-photo projection measurements, I found this margin of error to be small for practical purposes. For example, if a wall measured 50 meters, by scale, on the projection map, there would be an error of less than 1 meter in the measurement of this same wall on the ground. Thus, the projection maps seemed effective and accurate enough for the settlement-pattern study.

There were, of course, sites which did not show to advantage on the photographs and for which any but the most gross projections were impossible. Steep terrace dwelling sites, because of the slope, could not be satisfactorily projected. The maps which I made of many of these are little more than sketches supplemented with chain measurements and occasional compass readings. At other times, heavy *monte* growth covered a site so that it was impossible to use the air photographs for anything more than general location data. These sites, which were usually on flat ground, were more successfully mapped than the hillside sites, as the chain measurements were more simply and accurately taken. For most site maps the direction arrow indicates true north, as this was obtained from the aerial quads. There are some exceptions to this, however, where, because of a lack of a projection, a direction reading was taken by compass. In these instances, the map has been reproduced with a magnetic north designation.

Throughout, heights of mounds, buildings, and walls have either been estimated by eye or checked with a hand level. Contour elevation, as it is used on some maps, was taken in another way. The Servicio Aerofotografico provided us, in addition to the air photo quads, a partial series of contour maps at the same scale. These contour maps, with intervals of 10 meters (and 2-meter subdivisions in some cases), had been made from the air photos, not from ground surveys. They did not offer a complete valley coverage; but, where available, we used them for epidiascopic projections in the same manner as the air photographs. After completing a site tracing from an air-photo projection, the matching contour map was inserted into the epidiascope at the same place and orientation as the air photo. This was done by means of north-south coordinate lines drawn through both. When the contour map was properly adjusted in the machine, the contours were traced onto the map projection, over the site outline, and the meter elevation figures recorded. These superimposed contour projections were only moderately successful. Many of them are inaccurate. For example, the reader will note that canals will occasionally cross from a lower to a higher contour when actually the canal is running down grade. In these cases it is certain that the air-photo projection is the correct one; the contour projection wrong. In spite of this, I decided to use the contour lines, when available, to indicate general slope and elevation of terrain. A 10-meter interval is a large one, and is useful only for steep slopes; but there are many of these in Virú, and the fact of a site being on a precipitous hillside or relatively flat ground was worthy of indication. Within the contour lines there were often lesser elevations that were significant, and these have been indicated by a hatched symbol.

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[4] The master site map (fig. 2) and other Valley maps in this report are simplifications of the McBryde map.

Site mapping was carried out on those locations or features where, in effect, there was something worthy of mapping. Of our 315 Virú sites, at least half showed no noteworthy surface features. These were "mapped" in the sense that they were located on the air quads and, eventually, the master-site map, but individual drawings were not made. Such sites were midden piles without rock or adobe walls, earth and refuse mounds of the Lower Valley which appeared only as low hillocks, and many of the smaller dwelling-construction or pyramidal mounds about which no surface data seemed particularly significant except gross size and general location. Because of the differential in the construction of sites in the Valley, those in the middle and upper portions having rock foundations while those in the lower sections being of adobe, more middle and upper region sites were mapped in detail. There are numerous exceptions to this, however, as there are many adobe-walled Lower Valley buildings whose surface outlines are reasonably clear.

A series of symbols have been used in the site maps (fig. 3, p. 26). These indicate stone masonry walls, adobe walls, superimposed terraces, and all the other necessary features of the map. In some cases these are supplemented with names, such as "road," or "canal," "massive wall," etc. Proportion and scale have been sacrificed slightly to the symbols. For example, in the scale we used it was impossible to indicate a stone wall in proper symbol that would be rendered less than 1-meter wide on the map. Actually, most rock-walled dwellings had thinner walls than this; however, features of this sort are described in the text where dimensions are given.

Theoretically, the survey sites were selected at random. Actually, a number of factors tended to skew our sample, and these should be pointed out. As indicated in the previous paragraph, sites of the upper drainage offered better possibilities for mapping; hence, we included in our sample more upper- than lower-region sites. Also, as any archeologist knows, the big, impressive sites command one's attention before the minor midden heap; and it is only fair to say that we have, proportionately, given a better coverage to big sites than to small ones. In retrospect, we see the Virú-settlement job as a much larger one than we had anticipated. Our total of 315 is no more than one-quarter of the total prehistoric sites in the Valley. This estimate is made from observations in the Valley and from inspection of the air photographs. In the interests of a fair sample, we did, however, inspect all regions of the Valley, going inland to a point 10 kilometers above the Huacapongo-Upper Virú confluence. Furthermore, we attempted to include a representative sample of sites of all different functional classes, i. e., burial places, dwellings, temples, fortifications, etc. Differentiations of this sort lead us into our next topic, classification of the sites.

CLASSIFICATION

As this purports to be a study aimed at functional interpretation of settlement data, it behooves us to assume a "functional" point of view. To try, in other words, to conceive of the "site" phenomena as representing units or categories of prehistoric activity. A past inhabitant of Virú approaching his home, in a compact cluster of similar homes, might have thought of the whole as his "village." As such it was a unit of space and structure with meaning for him. But did he consider the similar house cluster 200 meters distant as "his village" or "another village"? Similarly, he must have had certain thoughts about the pyramidal mound 500 meters down the quebrada, but we do not know if he conceived of it as part of "his village," or a part of someone else's village, or an isolated entity. Perhaps he did all of these, quite naturally, in the different compartments of his consciousness. The significant thing is that there are different orders of function. In some contexts the house is meaningful, in others the immediate cluster of houses, and so on, through larger communities. Certainly, for some purposes the whole of Virú must have been considered as a single settlement unit. For example, there is little doubt that the administrative-minded Inca looked upon it as such after their domination of the Peruvian north coast. We can, then, only approximate what was once meaningful in our functional classification.

The initial breakdown in the classification of Virú Valley sites is into four functional categories: (1) living sites, (2) community or ceremonial structures, (3) fortified strongholds or places of refuge, and (4) cemeteries. The primary purpose of sites of the first category was that of dwellings. The second category includes sites believed to be of special community importance as political and/or religious centers. The meaning of the third category is clear, as is the fourth. With this broad, fourfold division there are indications that some sites bridge from one category to another. As an example, the Hilltop Redoubts, which as fortifications were placed in category 3, contained structural features suggesting that they also were ceremonial centers and dwelling sites as well. There is no perfect "either or" treatment of much of the settlement data; but several basic activities are implied in the site features, and these seem best subsumed under the categories which I have listed.

The purpose of the subsidiary breakdowns of these categories is descriptive and historical. Three of the four categories are so divided into types and subtypes. As the survey progressed, and later as the data were reviewed, it became obvious that sites of a certain ground plan or construction were more commonly associated with particular ceramic datings. These correlations were, obviously, significant in tracing the development of Virú settlements through the course of the Valley's prehistory. Perhaps these differences in site form also held a functional significance which will be understood, eventually. The outline given below lists these types and subtypes, by name, under the four functional categories.

I. Living sites:
    Scattered Small-House Village.
    Agglutinated Village:
        Irregular.
        Regular.
    Semi-isolated Large House.
    Compound Village:
        Rectangular Enclosure.
        Great Rectangular Enclosure.
        Rambling Enclosure.
II. Community and ceremonial structures:
    Community Building.
    Pyramid Mound.
    Pyramid-Dwelling-Construction Complex.
III. Fortified strongholds or places of refuge:
    Hilltop Redoubt.
    Hilltop Platform.
    Hilltop Village (Agglutinated).
    Castillo Fortification Complex.
IV. Cemeteries.

These types are defined in section II of this report, under the various culture period subsections headed "Summary of Site Types." As they are discussed with reference to specific sites, qualifying and modifying descriptions are employed which, though not formalized as still other "types" or "subtypes," may prove to have significance in tracing the history of Virú settlements. As a case in point, the Rectangular Enclosure Compound, as it is found in the earlier periods, has some easily perceptible differences from those of the late periods. I have called attention to these differences which may, ultimately, be exploitable as a subtype of chronological significance.

In describing the living sites, there is a special circumstance to be noted. All of the types and subtypes listed in the outline are classed as "Exposed Dwelling Sites." This is a descriptive designation of convenience which refers to sites uncovered by refuse or natural deposits and exposed to view. In such sites it was feasible to map and record the varying patternings in ground plans which have been divided into "Agglutinated Villages," "Compound Villages," etc. It was also realized that there were a great many other living sites in the Valley which revealed no structural or foundational evidences. These have been described under the terms, "Dwelling-Construction Mounds," "Earth-Refuse Mounds," and simply "Midden Accumulations" or "Additional Occupation Sites." It is probable that if we knew the arrangement plans of dwellings contained in, or once represented by, these buried and destroyed sites they would fall into the types and subtypes established for the exposed sites. Excavation in some of the buried sites has, in fact, shown this to be the case. However, without excavation, they can only be listed in the residual classes which we have provided.

Although we have set up functional categories and descriptive types for sites, we have avoided the question, "What is a site?" Where is the line drawn separating site from site for the practical purposes of archeological survey? We have been inconsistent about this in the Virú survey. We felt that the important thing to do in gathering the field data was to record it in convenient units or pieces. Small middens, 50 meters in diameter, have been given individual site survey numbers along with great Pyramid-Dwelling-Construction Complexes extending over several hundred meters and containing numerous structures. At times, large complex sites were divided into site sections, with each section numbered. This was for convenience in collecting pottery samples in an attempt to check the possibilities of differential dating with reference to different parts of the site. The opposite extreme was also resorted to. A Castillo Fortification Complex, a Community Building, a cemetery, and a village site, all in close proximity, were grouped under a single site number.

In reviewing the field data, a number of interesting relationships were noted among the various units which we had called sites. Quite often it could be seen that a series of house clusters, or villages, each given a separate numerical status in the survey, were all a part of a larger scheme of settlement. They may have been grouped together in a narrow quebrada behind a defense wall, or they may have been scattered about a central redoubt or stronghold. In other examples, it seemed fairly obvious that the inhabitants occupying a particular stretch of the Valley, during a certain period, had joined forces to construct a nearby Pyramid Mound. Such larger patternings have been referred to as "community assemblages" or "community patterns," and it is likely that in these communities we have functioning units which could also have been described as sites. I have formalized no types for these community assemblages as this seems premature at this stage of settlement-pattern study for Perú. There are, though, suggestions of types and chronological changes in these assemblages. Investigation along this line, that of the community pattern or assemblage, appears to be a fruitful course for further research.

No formal typology was set up for public work features which include the functional categories of canals, cultivation plots, roads, and walls. The purposes behind them are, for the most part, clear. Successful typological differentiation may, though, be built up around differences in the rather complicated cultivation plots. I do not have sufficient data for this now, but there are suggestions that the size and design of these plots have changed in the course of the Virú prehistoric sequence.

ASSOCIATION AND DATING

The primary method of dating the archeological sites in the Virú Valley was by association. The dating medium was pottery. Ceramics were arranged into a sequence of types, and frequency occurrences of these types by vertical stratigraphy and by horizontal stratigraphy or seriation. Certain type combinations and percentages of types in combination were designated the equivalents of periods or subperiods in the sequence. This chronology consists of seven major ceramic periods, three of which have, in turn, been divided into subperiods or phases. These periods and phases are Guañape (Early, Middle, and Late), Puerto Moorin (Early and Late), Gallinazo (Early, Middle, and Late), Huancaco, Tomaval, La Plata, and Estero. With these periods established in archeological ceramics, the next step was to determine their associations or contexts. This was done by assuming that other prehistoric manifestations found in association with pottery of a certain period dated from that period. Thus, if a group of dwellings yielded from its house floors a statistically adequate sample of pottery specimens belonging to the Tomaval Period.

that dwelling group was believed to have been built and occupied in the same Tomaval Period. This, in brief, is the associational method, the assumed contemporaneity of two or more objects or features found in context.

Although the ceramic sequence for Virú was primarily erected by vertical stratigraphy, by far the greater number of pottery collections were dated by horizontal stratigraphy or seriation. These collections were surface samples taken from most of the Virú sites, and they were seriated according to ascending and descending percentage frequencies. This was done by Ford (1949 a, pp. 34–57). Ford's ceramic typology and the seriation of these ceramic types into a sequence is an operation contained in itself, and must be appraised and criticized as it stands alone. As his chronological seriation (Ford, 1949 a, fig. 5) closely parallels the vertical stratigraphic results from the combined studies of his colleagues (Ford, 1949 a, fig. 4), I believe that Ford's findings are, in general, correct. This is not meant to imply that the Virú seriation is above criticism. The point I wish to make is that, methodologically, it has nothing to do with the application of the principle of association in dating the sites. Ford stands responsible only for the seriational dating of the Virú *pottery collections.* I must accept the responsibility for applying those dates to the *sites.* I make this distinction because quite different processes are involved in the two operations, and it would be easily possible for a pottery collection to be correctly dated, and yet the site, building, or feature with which it was associated could be incorrectly dated by the collection.

The greatest single weakness in the present study is the associational dating. Assuming Ford's pottery collection dates to be 100 percent correct, we are still left with the problem of how valid are the associations of collections and sites. Virú is a relatively small valley, and it was densely occupied in the archeological past, with favorable locations frequently reoccupied. Multiple ceramic period components are found at many of the sites, and in each case there is the question of which component dates the structural features on the site. In the lower areas of the Valley multiple occupation was less commonly noted from surface evidences; but the excavating parties often found that sites which, showing pottery of only one period on the surface, had subsurface deposits containing sherds of one or more earlier periods. In some of these sites it could be assumed that the surface structures did date from the topmost pottery period; in others excavation would be necessary to determine this. The use and re-use of site areas involve numerous possibilities. Old mounds or villages were often used for later period burials, or Pyramid Mounds were constructed in which the builders utilized earlier refuse deposits. The only safe and sure guide in such situations is careful excavation, and, even then, the dating problem is not always satisfactorily resolved.

Our survey did not have the time nor the means for detailed excavation, and I was forced to rely upon other ways of determining the validity of the surface pottery collection-site associations. The most direct of these was by observing the relationship of sherds to specific sections of, or features within, a site. Pottery from the interior of a room would, for example, be more likely to be useful in dating the occupation of a building than sherds found in the rubble fill of a wall interior. Obviously, hard and fast rules cannot be devised for such cases and each site must be considered separately; but there are situations with strong probabilities in one direction or another. The other means of appraising the validity of pottery associations is through the establishment of site types. This relies indirectly upon pottery associations but other factors are involved. If, for example, several small rectangular Pyramid Mounds made of cane-marked rectangular adobes are found to be associated only with pottery collections of the Late phase of the Gallinazo Period, it is highly probable that a similar mound made of similar adobes and having a mixed ceramic collection of Early Puerto Moorin and Late Gallinazo actually dates from Late Gallinazo. Thus, by correlating specific types of sites with certain periods we have additional evidence for dating. Care must be taken that this method is not abused. It would be easy to manufacture correlations of ceramic periods and architectural or settlement-plan types by circular argument.

In the present study, I was presented with multiple dating choices for a good many sites, and my decisions have been based both upon a consideration of ceramic proveniences, when these were available, and upon site typology. In every instance, in the site discussions, I have tried to make all the factors clear to the reader. In only a very few cases have I disregarded a single component pottery date for a site. There were many times when it was tempting to do so; but at the present stage of our knowledge of Peruvian settlement and site types it seemed wiser to avoid "forcing" the data.

Although the great majority of the surveyed sites were dated by the association of the surface pottery collections, a substantial number of sites were placed in the sequence by excavation. These were the excavations conducted by Strong, Evans, Collier, Bennett, and Bird. Not only did their stratigraphic results provide a guide and check for Ford's seriation of surface collections, but their data with reference to the ceramic dating of various types of architectural and building features has been of great value to me. As opposed to the open surface, the pottery associations from the excavations were protected by sealed contexts and offered greater assurance.

In retrospect, I would propose that future settlement-pattern projects be prepared for some detailed excavation. An initial dating of sites could be carried on by seriation and association of surface collections at the time of site mapping, but this should then be followed by a careful review of the site data with respect to this tentative dating and to a classification of sites into types. Subsequent work might, then, be devoted to key excavations into sites of the various types. A program of this kind would not only tighten and secure the chronological frame of reference, but it would also be useful in throwing light upon problems of site use and function.

In the text, the sites of multiple component dates are described under period headings. This is done under that period to which the principal features, structures, or observable physical pattern of the site pertained. Such sites are, then, cross-referenced under the other periods represented in their pottery collections. Usually, this secondary cross-referencing is listed simply as an "additional occupation," not as a pyramidal mound, dwelling site, or whatever the particular functional category or descriptive type might be. There are examples, however, where a site was believed to have functioned in the same way in two or more periods and where it is listed doubly, or triply, as a cemetery, Pyramid Mound, Hilltop Platform, or fortification.

Because of the multiple periods of occupation for many sites a great many of them were counted more than one time so that the total of sites, by period, is greater than the actual number of locations, 315. The maps of site distributions by periods and phases are entered accordingly.

THE VIRÚ VALLEY: ENVIRONMENT AND INHABITANTS

THE NATURAL SETTING[5]

PRESENT-DAY APPEARANCE

The Virú Valley is a river oasis in the Pacific Coastal desert of northern Perú (fig. 1). It is located between latitudes 8°20′ and 32′ south. The nearest comparable valleys are the much larger Santa Catalina (Moche), which is 35 kilometers up the coast, and the considerably smaller Chao, 20 kilometers down the coast. In this part of Perú the orientation of the coast line is from northwest to southeast. Most of the north coast valleys, thus, run southwestward to the ocean. The intervening lands between the valleys are the high, sandy coastal plains and, farther inland, the foothills of the Andes. Near Virú, the coastal plain or shelf and the lower hills bordering each side of the Valley are between 20 and 25 kilometers in width. The Andean massif rises behind these.

The Virú drainage is 22.5 kilometers from its mouth to the convergence of the two tributaries which give rise to the main stream: the Upper Virú and the Huacapongo. These two branches extend back into the mountains, dwindling to narrow gorges, but do not head into the continental watershed (Kroeber, 1930, pp. 74–76). Above the Upper Virú-Huacapongo confluence, there is available bottom land and cultivation for a distance of about 10 kilometers. Modern cultivation does not extend up the much narrower and drier Upper Virú. Structurally, Valley width narrows from the sea inland, but, today, the cultivated lands are widest at the Valley center where they measure about 7 kilometers. Near the delta they are 3 kilometers wide, and in the upper reaches of the Huacapongo drainage they are a kilometer or less.

The sectional subdivisions of the Valley employed in the Virú survey are semiarbitrary, semiecological zones which are used throughout this report for convenience in referring to sites or other features (see fig. 2). They are as follows:

(1) Lower Virú-South.—The Valley southeast of the river and southwest of the Pan-American Highway.

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[5] The natural setting, climate, and geological background of the Virú Valley have been described in a previous work (Ford and Willey, 1949 b, pp. 21–28). This section is largely a brief summarization of that account.

(2) Lower Virú-North.—The Valley northwest of the river and southwest of the Pan-American Highway.

(3) Middle Virú-South.—The Valley southeast of the river and northeast of the Pan-American Highway. It is bounded on the north by the Cerro Sarraque and the point of convergence of the two tributaries.

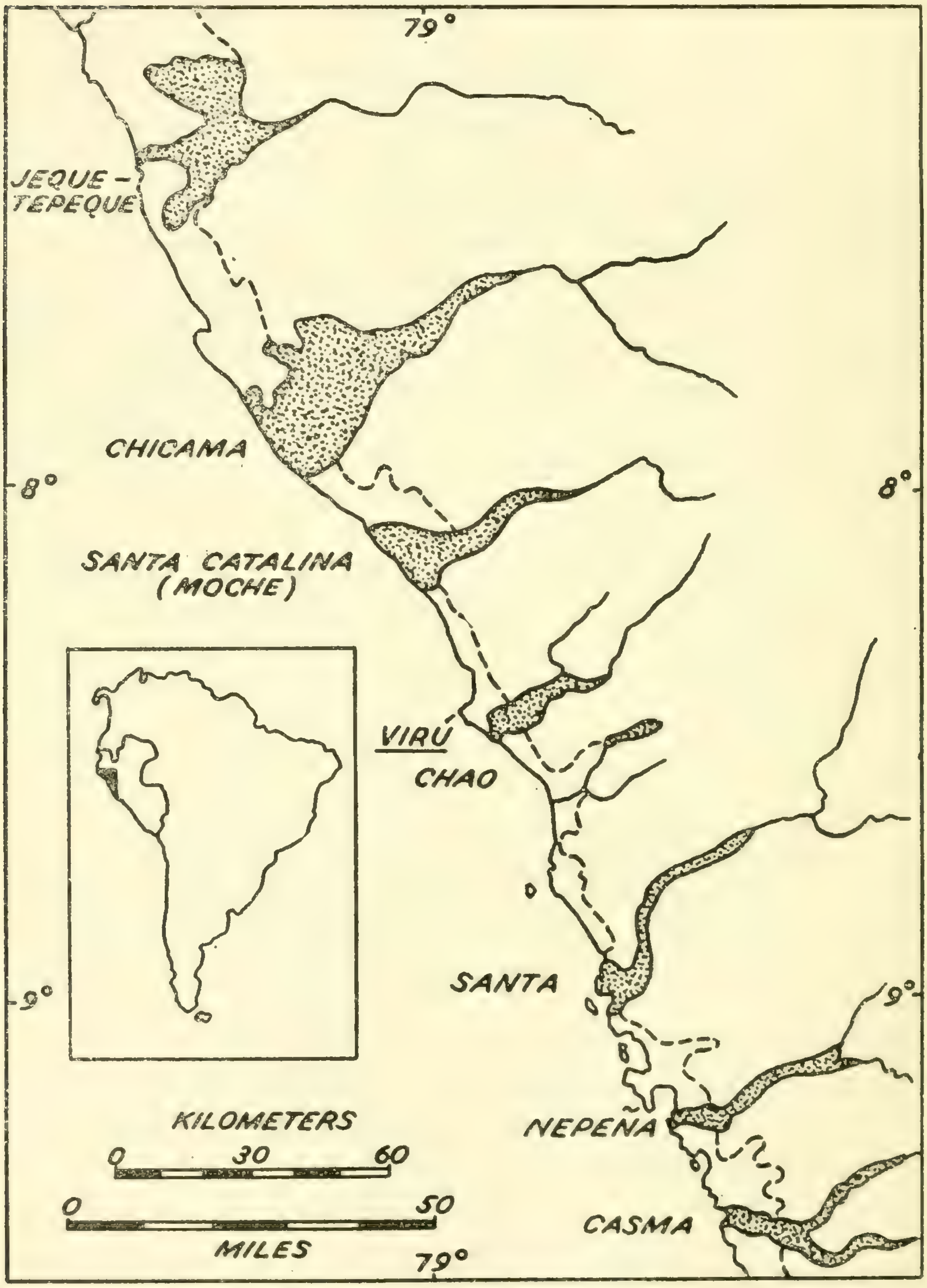

79°
JEQUE-TEPEQUE
CHICAMA
8°
8°
SANTA CATALINA (MOCHE)
VIRÚ
CHAO
SANTA
9°
9°
NEPEÑA
CASMA
KILOMETERS
0
30
60
0
50
MILES
79°

FIGURE 1.—The Peruvian coast and its valleys. The shaded areas indicate relative sizes of the cultivated valley basins. Compare Virú. (Redrawn from Ford and Willey, 1949 b.)

(4) Middle Virú-North.—The Valley northwest of the river and northeast of the Pan-American Highway. It is bounded on the north by the Cerro de Las Lomas and the point of convergence of the two tributaries.
(5) Upper Virú.—The drainage above the convergence with the Huacapongo.
(6) Huacapongo-South.—The south side of the river in the Huacapongo tributary drainage.
(7) Huacapongo-North.—The north side of the river in the Huacapongo tributary drainage.

On both sides of the Valley there are series of hills which form its outer limits. On the southeast side, the Cerro Compositan, (pl. 3, *bottom*) the Cerro Carretera, and the Cerro Huarpe are the major topographic barriers separating Virú from the Chao Valley to the south. On the northwest side, the hills begin back a bit farther from the sea. This northern mass is known as the Cerro de Las Lomas. The Huacapongo is bounded on the south by the Cerro Sarraque and on the north by the Cerro Niño and adjoining hills. At the juncture of the Upper Virú and the Huacapongo, the valley passage between the Cerro Sarraque and the Cerro de Las Lomas is no more than a half kilometer in width. The bordering hills range from 200 to 500 meters above sea level, much of this elevation being due to general upslope of the valley floor. All of the hills are barren rock, and their seaward slopes are piled high with drift sand carried inland from the beaches by the constant southwesterly winds.

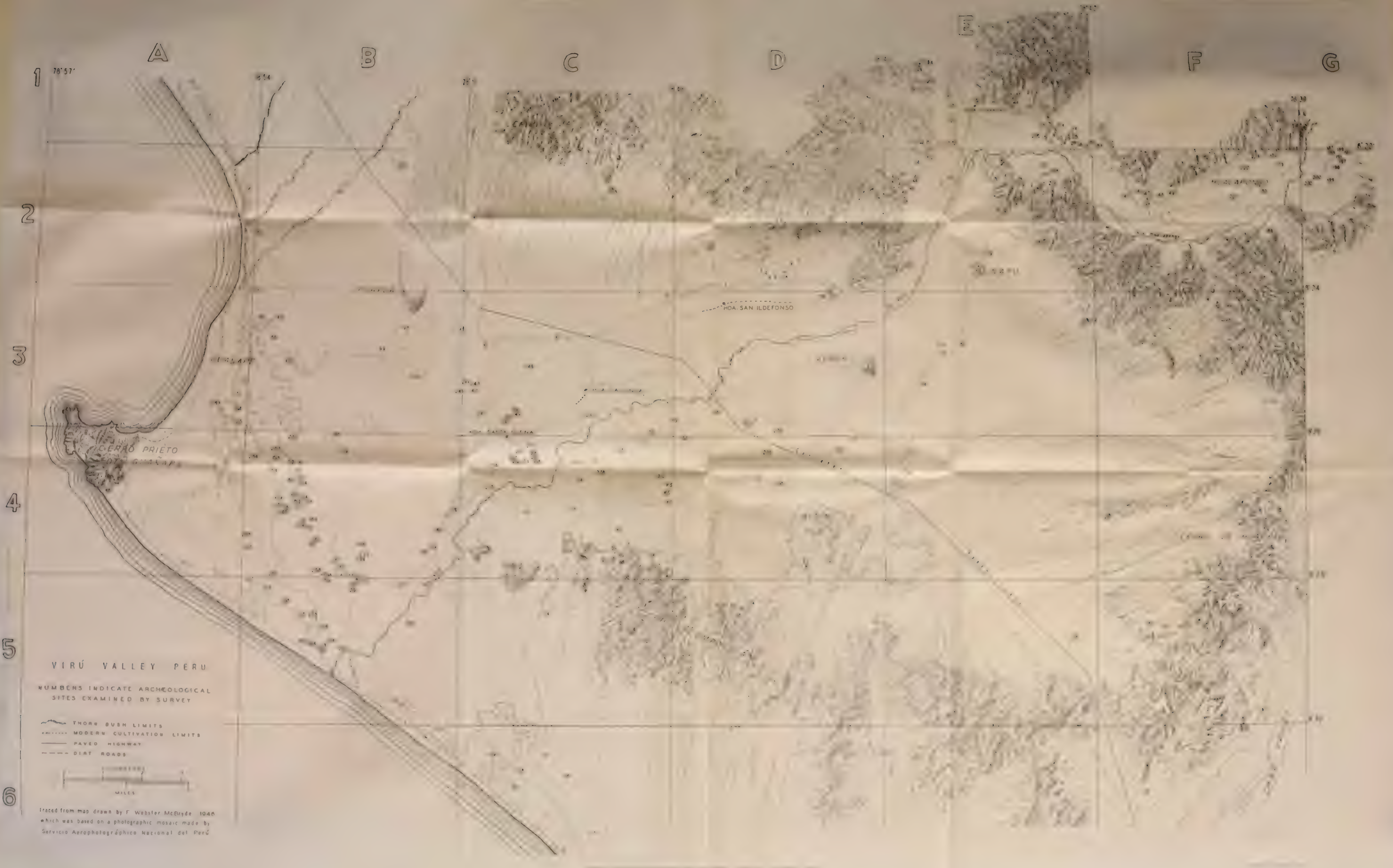
Within the basin formed by the hills, there are great sand slopes extending from the Valley floor up to and partially covering the bases of the hills (pl. 3, *top*). These are ancient drift banks of sand which are constantly accumulated by the winds from the sea and beach. At many points in the Valley a sharp declivity separates the sandy pampa from the cultivated floor of the Valley. It is likely that this declivity, which is now masked with sand in the Lower Valley, represents an old Quaternary terrace of the Valley. The upper portions of the Valley and Huacapongo (pl. 7; pl. 9, *bottom, left*) have been protected from these sands. Here, a number of steep, flat-bottomed quebradas open out of the bordering hills onto the Valley floor (pl. 6, *center, bottom*). These quebradas are choked with rocks which have been carried down from the surrounding hills as alluvial fill during the rare rains of the north coast.

A number of isolated hills rise out of the Valley floor or the adjacent sandy pampa. They are imposing landmarks, and, in the past, were often utilized for the construction of fortifications and mounds. The largest is Cerro Bitín, lying off the northeast flank of the Cerro Compositan. West of the Compositan there are a series of smaller hills, the Cerros de Las Piños. In the center of the Valley is the large Cerro Virú, or Santa Clara, which rises just back of the modern Pueblo of

Virú. In Middle Virú-South are the Cerros of Napo and Virú Viejo. And extending out into the sea, connected to the mainland only by a narrow sand spit, is a huge rocky eminence, Cerro Prieto. All of these hills are detached outcrops of rock in various stages of weathering. Some, like the Cerro Prieto, reveal the rock plainly; others, like Bitín or Cerro Virú, show very little rock on the surface.

Besides the true outcrop hills, there are a great number of smaller hills on the Valley bottom (pl. 6, *top*). These stand out as brown or buff hillocks or ridges of sand and earth. Some of them are old stabilized sand dunes. In many cases these dunes have been occupied in prehistoric times so that an accumulation of refuse, several meters thick, has been piled upon them. Others have been used as bases for adobe dwellings or adobe pyramid mounds. Often it is difficult or impossible to tell the structural nature of these mounds without excavation. Their size varies from tiny hummocks a few meters in diameter and a meter or so high to ridges a kilometer in length and several meters high. It has been suggested (Ford and Willey, 1949 b, p. 26) that many of the small mounds are neither adobe structures nor dunes but accumulations of salt-impregnated soil. The flooding of the Valley bottom lands of the north Peruvian valleys has been known to bring mineral salts to the surface. This results in a hard, sterile top-crust. Without deep plowing this crust cannot be redistributed and prevents cultivation. It is a reasonable possibility that the prehistoric agriculturists of the Lower Virú Valley periodically scraped this saline material from the fields and stacked it in gradually accumulating piles. Today, there are mounds composed of nothing but earth and cultural refuse which are highly saline. The abundance of pottery in these mounds, lying in what appears to be properly stratified sequence, also suggests that the salty earth dumps may have been sites for dwellings built of materials which have since perished.

Fronting along the ocean shore for a kilometer or two back from the sea is the beach and dune country of Virú. The present active beach is narrow, steep, and composed of fine sand. The drop-off in depth of the ocean is rapid, and the waves break close to the land. This active beach is defined by a high, even ridge of semistabilized dunes (pl. 9, *top*, *left*). In some places these dunes continue inland for two or more kilometers, a series of rolling ridges and gulleys (pl. 2, *top*). In other places there are flat, low-lying, slightly swampy grasslands immediately back of the beach ridge of dunes (pl. 2, *center*). In this belt of low grasslands or dunes, there are occasional patches of sunken pits or basins. These are best seen just north of the Virú Delta, but they occur elsewhere. The basins are sometimes rectangular, sometimes irregular, and they vary in size from 100 by 50 to 30 by 30 meters. They are about 1 meter below the general ground surface; but, as the soil removed from the basins has been piled upon the walls or

A
B
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1
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78°57'
78°54'
CERRO PRIETO
HDA. SAN ILDEFONSO
VIRÚ VALLEY PERU
NUMBERS INDICATE ARCHÆOLOGICAL SITES EXAMINED BY SURVEY
THORN BUSH LIMITS
MODERN CULTIVATION LIMITS
PAVED HIGHWAY
DIRT ROADS
MILES
Traced from map drawn by F. Webster McBryde 1946 which was based on a photographic mosaic made by Servicio Aerophotográphico Nacional del Perú

ridges separating the basins, they have the appearance of being from 2 to 4 meters deep. These basins are man-made and are called *pukios* (see pl. 54, *bottom*). The *pukio* is a subsurface cultivation plot excavated for the purpose of retaining ground water which flows down valley and lies closest to the surface near the beach. On the outer edges of the vegetation in Lower Virú-North there are several lagoons a kilometer or more inland from the shore. These lagoons are filled with ground water in the same manner that the *pukios* are watered. They differ only in being natural rather than artificial. In 1946, a year of abundant runoff from irrigation (pl. 5, *bottom*), these lagoons were full of water, and many of the *pukios* were wet and marshy.

We have said little of the vegetation of Virú except for the grasslands back of the beach. The Valley bottoms, as described, are largely in cultivation. Marginal to the cultivation, on both sides of the Valley, there is a scrub growth of low algarroba trees usually referred to locally as *monte*. The algarroba are tough, xerophytic trees armed with spines but bearing large, sweet "beans" which ripen in a long, lunate yellow pod. The *monte* growth subsists on a minimum of groundwater, although it thrives when there is an excess of water from irrigation, as in 1946. In Lower Virú-South there is a huge tract of land between the hills and the river which is not now in cultivation but very probably was cultivated in the prehistoric past. Today, this section has filled in with dense *monte* (pl. 4). In other places, the *monte* strip is not so wide. In the Middle Valley, for example, where the present limits of cultivation appear to be close to the maximum possibilities, this *monte* fringe is practically nonexistent. Aside from wild grasses, the algarroba *monte*, and the field crops, the only other vegetation of consequence is the larger shade trees which line some of the Valley's roads and are found near the Virú Pueblo and the major hacienda establishments. These are transplantations.

The native fauna of a valley like Virú consists, as of today, of quail, ducks, guano birds, and numerous smaller birds. Rabbits and rodents are the only animals, but in prehistoric time deer and the large cats probably came into the valleys. Fish, shellfish, and crustaceans are in the sea and along the beaches. Fish are still extremely plentiful; shellfish, apparently, were more common in the prehistoric past than they are now.

CLIMATE

The present climate of the Pacific Coastal desert, and of Virú, is dry and cool. The cold Humboldt current sweeps the coast, and cool southwesterly winds are steady and strong. There is little moisture in this cool air from the Pacific, and as it is warmed by the land it extracts all possible moisture from the earth. During certain months of the year (June to October) sea fogs are common. The opposite season, of sunshine and somewhat greater warmth, runs from November to May. The latter is the period of rains in the mountains and the full flow of the Virú River. The average annual temperature for Virú (estimated) is only slightly higher than 66° F. This even, monotonous climate is disastrously broken at intervals of from every 7 to as much as every 20 years. In these occasional years, rainy seasons result from the shift of the normal southwesterly winds to hot, tropical winds from the north. The heavy run-off from the hills into the valleys in these years is extremely destructive. It is in these rains that the boulder beds are deposited in the mouths of the quebradas and carried even farther down into the valley. Human constructions in Virú and the north coast region are all based on the premise that it will not rain; hence, the last great rain, which occurred in 1925, destroyed most of the houses in Virú. The adobe huacas and other archeological sites of the Valley all bear the scars of these rains.

Of especial interest to our study is the question of whether or not there have been significant climatic changes within the span of man's history in the Virú Valley. At present, the normal rains of the highlands, which feed the rivers of the coastal valleys, do not occur below an elevation of 3,000 meters or well above the Virú and its surrounding foothills. It is possible that this rainfall zone was lower down on the mountains at the time of the Guañape Period. In support of this it has been noted that Guañape pottery has been found in an occupation site in a small quebrada 8 kilometers up the coast from Virú. This quebrada heads up into the Cerros de Las Lomas which do not rise over 1,500 meters and, today, offer no runoff water. Other evidences of the same general nature have been adduced from the Chao Valley and the Cupisnique quebrada of the Chicama Valley. There is also a less convincing case in Virú, itself, involving the Late Guañape and Early Puerto Moorin Period sites at the foot of the Cerro Compositan in Lower Virú-South. These old villages are located back in small quebradas at considerable distances above the highest line of prehistoric canals or agriculture (Ford and Willey, 1949 b, p. 23). The case for climatic change within man's era in Virú is not proved, but there are suggestions pertaining to the early periods. It is unlikely that there has been any appreciable change from the later prehistoric periods down to the present.

GEOLOGICAL STRUCTURE AND HISTORY

The littoral zone of the north coast of Perú consists of a series of old marine terraces. These terraces have been cut across, at intervals, by the rivers descending from the Andes, of which Virú is one.

The coastal shelf is composed of shallow water deposits left at the western base of the Andes during a subsidence of the Tertiary. Subsequent uplift has exposed these deposits as the littoral. The terraces were probably formed during the Pleistocene by relatively rapid oscillations of the sea level. During each rise, the rivers and their tributaries formed large outwash fans, and as the sea was lowered they cut valleys in both the adjacent terrace and the fan which had been placed upon it.

From the end of the Pleistocene until late prehistoric or early historic times, Virú and neighboring valleys were in an aggradational stage. This is indicated in the width and levelness of the flat valley floors and in the filling of the small quebradas or tributary valleys with sediments. After leaving the hills, the rivers are not deeply incised but meander over the Valley flood plains to the sea. In Virú, the process of valley filling is shown to have been contemporaneous with human occupation.[6] In a cut bank made by the Virú River at a slight fall line just above the Pan-American Highway, river-laid deposits were interbedded with cultural material to a depth of about 5 meters below the present flood plain. The oldest of the cultural deposits was of the Guañape Period, the latest, near the surface, of the La Plata Period (see Site V–311, p. 312). At present, the process of erosion has replaced the aggradation as evidenced by the recent and deep channel of the Virú River in which the cultural deposits were exposed.

In addition to valley fill, there are modifications of the coast line which seem to have occurred within the span of Virú's human history. Sediments carried into the sea by the Virú River and, possibly, a slight rise in the land have contributed to this. The widest extent of this fill lies between the old beach bluff on which site V–71 is located and the rocky promontory of Cerro Prieto. As V–71 was a preceramic site, with a major dependence upon a marine economy (Cerro Prieto Period), it is probable that it was once situated upon an old beach line now marked by a low bluff. Since that time, the Cerro Prieto rock, which probably was an island, has been joined to the mainland by a sandspit; and the beach line has advanced several hundred meters.

THE HUMAN SETTING

PRESENT-DAY POPULATIONS

The modern inhabitants of the Virú Valley are, for the most part, of mestizo (Indian and European) stock. It is likely that a substantial number are the descendants of the aboriginal peoples who occupied the Valley in prehistoric times. As of 1946–47 there were about 8,000 persons in the entire Valley. In recent years there has been a gradual increase in the number of inhabitants resulting from improved health conditions and from immigration from the sierra.

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[6] Bird (1948 a, p. 21) has pointed out that virtually all the soil in the Virú Valley bottom, overlying the coarse material carried by heavy water discharge, has accumulated since the beginning of human occupation. He suggests that the heavy water flow closed with the last upward recession and disappearance of ice in the Virú drainage, a phenomenon just prior to the establishment of human occupation.

The population is disposed in three socioeconomic clusters. There are 2,160 people in the pueblo of Virú (pl. 8, *top*), which is located in Middle Virú-South. The remainder are grouped around the Hacienda Tomaval (pl. 9, *bottom, right*), at the confluence of the Upper Virú and the Huacapongo (pl. 8, *center, bottom*), and the Hacienda Carmelo, in Lower Virú-North. Both haciendas incorporate in their systems smaller subcommunities, most of which derive their names from old defunct hacienda establishments. San Idlefonso, San Francisco, Huacapongo, Calunga, and Santa Elena are some of these. There are also a few fishermen living near the beach at the deserted port of Guañape.[7]

The language of the Viruñeros is Spanish, and their culture is the rural Creole, or *criolla*, of the Peruvian coast. This is a culture type which has been studied by Gillin (1947) in the community of Moche in the Moche or Santa Catalina Valley. Its elements are mixed native and Spanish, but with the building of the Pan-American Highway along this coast a number of modern western industrial features have been added and are effecting rapid change. By 1947, the Viruñeros were familiar with automotive transportation, electricity, farm machinery, various household devices, and radio and telephone. Most of the inhabitants did not own or control such means or items, but they had some experience with them and their contacts with the outside world were greatly increased over that of their fathers or grandfathers.

Agriculture, today as in the past, is the basic subsistence activity of Virú. Kroeber (1930, pp. 74–76), analyzing the statistics of Adams and Garcia, lists Virú as having had 5,000 hectares of land under irrigation with approximately half of this cultivated in 1921. In 1946, there were about 7,000 hectares irrigated and cultivated in Virú. This particular year was an unusually wet one. Holmberg (personal communication) observes that fluctation between wet and dry years will be as much as 2,000 hectares. Comparatively, Virú is a small valley, and because it does not head into the Continental Divide is rated as a "second-class stream" (after Adams, 1906, from Kroeber, 1930, p. 74). As such, it ranks with Nepeña, Casma, Chao, Huarmey, and Supe and below the more important agricultural valley centers of Lamabayeque, Chicama,[8] Moche, or Santa.

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[7] Much of this information and that which follows in this section is based upon data received from Allan R. Holmberg and from Holmberg's preliminary publication (Holmberg, 1950). Ford and I also published a brief section on the modern settlement of Virú (Ford and Willey, 1949 b, pp. 27–28).

Maize is the most important single crop in Virú (pl. 9, *center, right*) and is grown in all parts of the Valley.[9] It comprised about 80 percent of the total acreage under cultivation in the 1946–47 survey, and is frequently grown along with beans, squash, and vine calabashes. Other food staples are wheat, *lentejas*, and rice, although none of these are grown in large quantities. In the Upper Valley areas, sugarcane is the main commercial crop, and it is processed at the Hacienda Tomaval. Cotton is grown in the Lower Valley around the Hacienda Carmelo and its subsidiaries. More recently, fruits and truck-garden produce have been popular in the Middle Valley around the pueblo of Virú. These include tomatoes, *paltas*, bananas, pineapples, papaya, *pacai*, and others. These are consumed locally but are also trucked to the nearby provincial capital of Trujillo for market.

Many techniques of cultivation have changed with the last 50 years since the introduction of the steel plow, tractor, and harrow, but the all-important irrigation systems are maintained much as they were in the ancient past (see pl. 50, *bottom*, for modern canal). Steel doors have been placed on the main laterals, but otherwise they probably appear much the same as they did in A. D. 1000. A national government representative lives in Virú and has over-all authority in irrigation matters. Maintenance of the canals and the irrigating of fields are carried out under his direction with the help of a number of local subofficials. Holmberg (1950, p. 373) has described the water-control system and the function of these officials:

> All water for irrigation in Virú is the property of the State. Its distribution is rigidly controlled by a paid government official. . . . Every time a farmer needs water for his fields he must apply for it to the commissioner who then supervises its distribution through a series of . . . *mitayos*. These people are members of the community, and the irrigation system is under their constant vigilance. They receive no pay for their services, but they are entitled to water their fields before anyone else in the village. So scarce is water in Virú that only one crop can judiciously be grown per year, and a farmer must pay for all water used to irrigate his fields.

The seriousness surrounding the business of water and water usage in the Peruvian coastal valleys is pointed up by Kosok (1940, p. 172), who says:

> (The) struggle for irrigation water still goes on today. The most comprehensive and important sets of laws along the coast are those regulating water rights.

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[8] According to the 1921 figures, Chicama had 30,000 irrigated hectares and Moche 10,000.

[9] The statement in Bennett (1939, p. 19) and Ford and Willey (1949 b, p. 27) to the effect that cotton is the principal crop is incorrect.

These laws, although recast into forms of present-day ownership and property rights, undoubtedly are a continuation of old attitudes about irrigation cultivation. In Virú, within living memory, the agricultural year began with the November festivals accompanying the communal cleaning of the irrigation ditches to prepare them for the waters from the mountains which commence in December. These surely hark back to the prehistoric past when irrigation, as we will see farther along, was more extensive in Virú Valley than it is now. Today, the individual farmer is responsible for cleaning a section, and this is done without ceremony.

Aside from agriculture, fishing affords a living to a few families, and some people supplement farming with fishing. The waters off Guañape abound in fish, but the techniques used are simple and involve nets, hooks, and reed boats, all forms which can be brought up from the remote past. Hunting is largely for recreation, although the trapping of lizards provides a modest amount of food for some families.

The larger domesticated animals are decreasing in Virú. With the shift to modern transport, horses and burros are no longer as necessary as they were; sheep do not provide fibers for a native textile industry which has vanished; and, with the increase in commercial farming, there is insufficient grazing land for cattle. Pigs, the native guinea pig, and fowl are plentiful, however.

The great rain of 1925 wiped out nearly all of the houses of Virú pueblo and elsewhere in the Valley. Previous to that time, the buildings had been made of wattle-and-daub and roofed with mats. After the flood, most of the houses in the central part of the pueblo were reconstructed of adobe. Concrete floors and foundations also appeared. In other parts of the Valley there are adobe houses, but most of the country places are still of wattle-and-daub (pl. 9, *center*, *left*). It is said that in 1813, at the time of the first census, most of the houses of the Valley were made of cane, with algarroba columns and beams, and roofed with banana leaves. The walls were not, however, mud-plastered as they are today.

Modern Virú houses are usually of two or three rooms. The front room is a *sala*, or living room, entered from the street. It may or may not have windows. Back of the living room is the bedroom, either entered directly from the *sala* or from a hall-passage. At the rear of the house is a kitchen-corral combination walled on one or more sides with canes and mud and only partially roofed. Furniture is simple and mostly of Colonial Period derivation, including chairs, tables, benches, and religious pictures. Mats are used for sleeping, and these are placed directly on the floor. Adobe pedestals for wash-basins or for cooking are seen in some houses (see Holmberg, 1950, opp. p. 384).

Fifty years ago Virú was self-sustaining in its crafts, producing pottery, textiles, and other goods for the person or his home. In recent years the native craftsman has been replaced by imported manufactured goods. Along with this has come a change in clothing, the garb now being thoroughly "westernized," with the Indian costume, which is still popular in the sierra, rarely seen.

Although there are some secondary automobile roads, travel to more remote parts of the Virú drainage is still by burro or foot. Once in the pueblo, however, the individual with sufficient money can go by bus on the Pan-American Highway (pl. 9, *top*, *right*) to the major cities of the country. Sea travel, important in shipping produce in the nineteenth century, has been discontinued since 1909.

There is some local government, with the *alcalde*, or mayor, of Virú pueblo elected to office. Other officials are appointed by the national government. In general, Holmberg (1950) reports apathy toward national politics but some "home-town" interest. The Catholic church is the nominal religion of all the inhabitants, and sponsors an annual series of fiestas which have religious, social, and recreational significance. Aside from this function, its power for social control, or as an ethical force, is not strong in Virú. As in many Creole or mestizo societies of Latin America which have a significant Indian background, there is a heavy blending of ancient ritual with that of the church.

In 1946–47, 82 percent of the land of the Valley was owned by the two big hacienda systems. This land is worked either by hire or on a tenant basis. Six percent of the land, mostly marginal tracts, belongs to the State. The remaining 12 percent is divided among 280 small holders. These last live in the Middle Valley, near the pueblo, the shops and services of that community being sustained by them. Carmelo and Tomaval both maintain mercantile shops for the people in their regions. Virtually all agriculture and other economic activity is handled on an individual-ownership or enterprise basis. Cooperative work groups, for exchange of labor, which flourished in the village in historic times, have disappeared.

THE HISTORIC PERIOD [10]

Following the collapse of the Inca state in 1532, the excesses of the Spanish conquerors effected a rapid decline in Indian population throughout the coast and highlands of Perú and highland Ecuador. By 1572, 40 years after the European impact, there were fewer than 1,500,000 Indians in the area. The rate of reduction during this period has been variously computed (Kubler, 1946, pp. 339–340; Rowe, 1946, pp. 184–185). Conservatively, population is estimated to have dropped from an Incaic maximum of from 4 to 6 millions. The decline (Kubler, 1946, pp. 334–340) of this early Conquest Period seems not to have been the result of epidemic disease but of maltreatment. It is likely that an increased death rate, a decreased birth rate, and the flight of many of the Indians to regions east of the Andes all contributed. This decimation was felt everywhere, but, in general, the more accessible coast suffered worse than the sierra. We do not know the specific history of Virú, in this time, but the Valley undoubtedly suffered the shock and upheaval that swept the rest of the country.

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[10] The Spanish Colonial Period in Virú will be treated in detail by the Peruvian historian Jorge Zevallos Quiñones as a special section in the forthcoming publication by Holmberg and Muelle on the ethnology of Virú.

Throughout the latter half of the sixteenth century the Indians were subjected to the system of the encomiendas. The Spanish colonist, as an encomendero, controlled and benefitted from the labor of Indians in certain regions assigned to his jurisdiction. Although he owned no title to the land, he was authorized to demand tribute from the laborers. After the sixteenth century, the administration of these private beneficiaries was replaced by a royal administrator, the corregidor. Under both systems agricultural production fell far below prehistoric standards, and this curtailment was one of the main causes of depopulation. The effects of this are seen in Virú from an account of the Valley during the mid-Colonial Period.

Miguel Feyjoo (1763, pp. 128–136), writing in 1763, describes the Virú Valley and its main settlements of that time. The Virú pueblo, which had been founded some 200 years before, was administered by a crown official who collected annual tribute from all of the tax-paying inhabitants. A priest was stationed there, and he conducted the sacrament in the haciendas of Tomaval, San Ildefonso, and Santa Elena, among others. The haciendas produced corn, beans, wheat, sugarcane, and cotton. Cattle are also mentioned as grazing in the *monte* near the Hacienda Santa Elena. In speaking of irrigation, Feyjoo says that during heavy rains in the sierras there was water as far down the Valley as the pueblo, but in other times the haciendas in the upper part of the Valley took the water for their own use and there was little or none left for the fields below. This is dramatized by his observations on the port of Guañape, which at that time was as nearly defunct as it is today. Nine or ten fishermen's houses made up the community of Indians who fished for part of each year. Its semidesolate state was attributed to the lack of water resulting from over-use in the Upper Valley. As there is evidence that prehistoric canals passed within a reasonably close distance of the Guañape section (see pp. 363 and fig. 4), Feyjoo's opinion of the cause of the desertion of Guañape in Colonial times may be correct. He offers the same explanation for the desertion of the Chao Valley.[11] This, again, suggests that irrigation in the Chao was in the traditional memory of the mideighteenth century inhabitants of Virú; and, in this connection, a hypothesis of Kosok's (personal communication, 1947) may be borne out. This concerns a possible distributary canal route leaving the main canal on the south side of Huacapongo and passing southward through a low saddle which dissects the Cerro Sarraque from the mass of hills to the east. This distributary then angled southeastward, running north of the Cerros de Huarpe, and emptying into the Chao Basin near the present Hacienda Buena Vista (fig. 4, *bottom*).

According to Feyjoo's entries, 1909 fanegadas of land were under cultivation, by pueblo and haciendas, in 1763. This includes 300 fanegadas listed for the Hacienda Buena Vista, presumably the establishment still in operation in the upper Chao. The 1909 fanegadas reduces to about 1,200 hectares, or about one-sixth of the total area under irrigation and cultivation in 1946.[12]

Feyjoo enumerates only 533 persons in the pueblo and on the haciendas. This figure is far below the number that could have been supported on 1,200 hectares, and suggests that not all food grown in the Valley was consumed locally. This was probably close to the nadir of population for the Valley during the Historic Period, and it corresponds, in general, to the low point for Perú as a whole (Kubler, 1946, p. 340).

By 1813 the pueblo of Virú had about 1,000 inhabitants. Valley figures are not given but they should be double this or more. Gradually, but surely, the Indian and local mestizo populations were on the way up. The present figures of 8,000 people for the Valley and 7,000 hectares under cultivation are still well below a reasonable subsistence ratio, but it must be remembered that a large acreage is devoted to crops grown for export, like sugarcane. The Valley is more prosperous now than in the depths of the Colonial Period; but, if we are correct in appraising the prehistoric food potential and population (as we shall do further along in this report), the present production is but a fraction of what is possible.

THE ARCHEOLOGICAL PAST

Evidences of the past.—Along the margins of the Virú Valley, towering over the present-day dwellings, are the great monuments of the prehistoric past (fig. 3). The dramatic Castillo de Tomaval with its castlelike outline against the sky, the high, remote structures of the

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[11] Feyjoo probably refers to the lower Chao as, a little farther along, he mentions the Hacienda Buena Vista (presumably in the upper Chao) as being under cultivation.

[12] There are 1.59 acres to a fanegada, and a hectare equals about 2.5 acres.

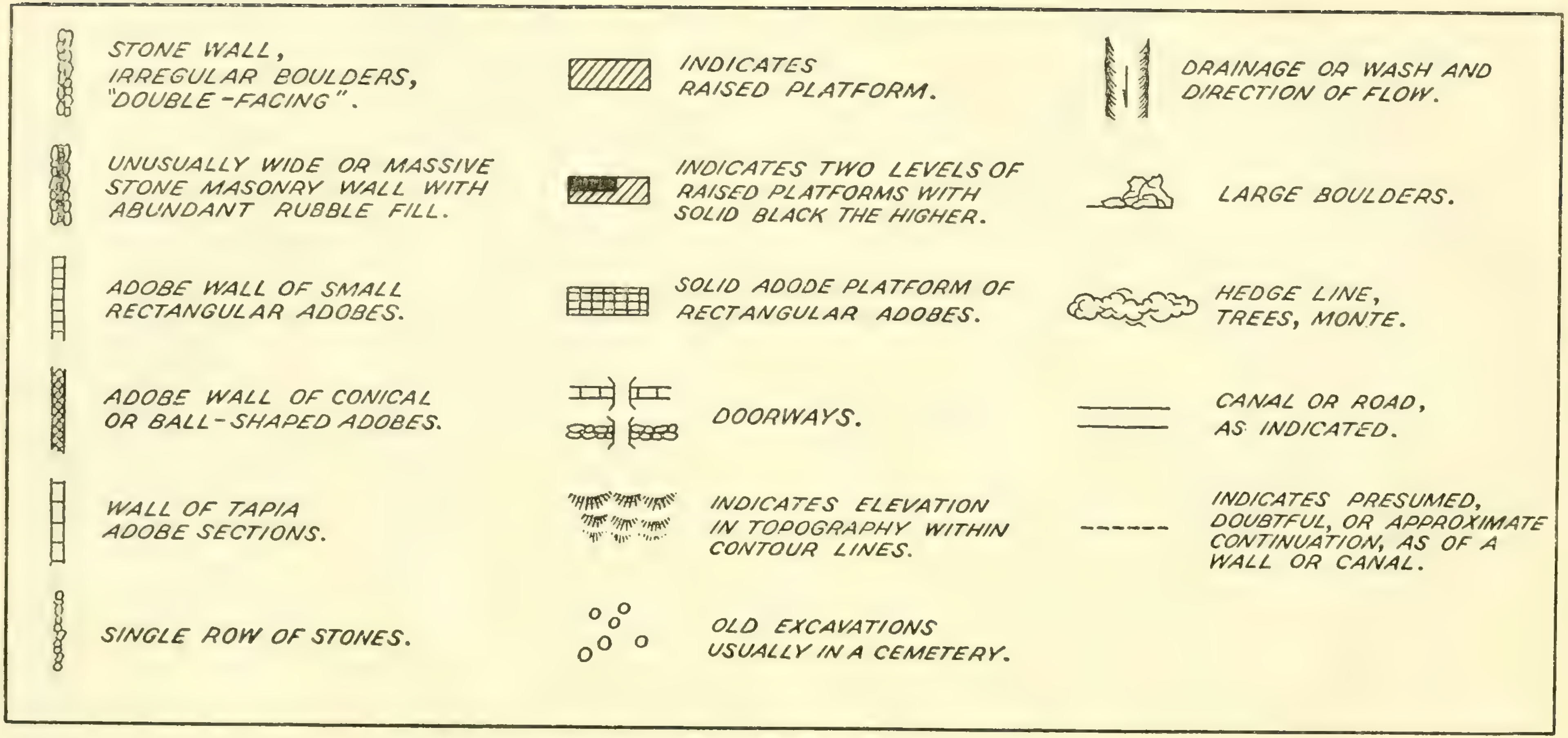
STONE WALL, IRREGULAR BOULDERS, "DOUBLE-FACING".
UNUSUALLY WIDE OR MASSIVE STONE MASONRY WALL WITH ABUNDANT RUBBLE FILL.
ADOBE WALL OF SMALL RECTANGULAR ADOBES.
ADOBE WALL OF CONICAL OR BALL-SHAPED ADOBES.
WALL OF TAPIA ADOBE SECTIONS.
SINGLE ROW OF STONES.
INDICATES RAISED PLATFORM.
INDICATES TWO LEVELS OF RAISED PLATFORMS WITH SOLID BLACK THE HIGHER.
SOLID ADODE PLATFORM OF RECTANGULAR ADOBES.
DOORWAYS.
INDICATES ELEVATION IN TOPOGRAPHY WITHIN CONTOUR LINES.
OLD EXCAVATIONS USUALLY IN A CEMETERY.
DRAINAGE OR WASH AND DIRECTION OF FLOW.
LARGE BOULDERS.
HEDGE LINE, TREES, MONTE.
CANAL OR ROAD, AS INDICATED.
INDICATES PRESUMED, DOUBTFUL, OR APPROXIMATE CONTINUATION, AS OF A WALL OR CANAL.

FIGURE 3.—Symbols for detailed site maps.

Sarraque ridge, and the mammoth platforms, courts, and galleries of Huancaco—these have an unreal dream quality, for even in their ruinous state they attest to a power and glory utterly alien to the Virú we see around us today. As one grows accustomed to the Valley, this enormous weight of the past becomes ever more apparent. A pigsty is discovered to be a courtyard of an ancient dwelling, a horse corral nestles against the corner of a pyramidal mound, and literally everywhere the broken pottery debris of 2,000-year-old civilizations is scuffed underfoot. This physical residue of former, non-European centuries is not completely ignored by the present Viruñeros, but the outsider's casual impression is that it has little psychological or emotional significance to today's inhabitants.[13] It has simply become part of the landscape around which most of them must earn a hard living.

Probably the most striking difference between the Valley today and in pre-Columbian times results from man-made changes in irrigation and cultivation. The archeological traces of old canal systems and garden plots show quite clearly that the watered area of the Lower Virú Valley was once almost double what it is at present (fig. 4). In 1946 the cultivated land near the delta of the river was 3 kilometers in width, but we have evidence that this strip had been from 6 to 9 kilometers wide during the prehistoric Gallinazo and Huancaco Periods. Almost the whole south side of the river bottom, below the line of the Pan-American Highway, is now in scrub-growth *monte* or desert. This land, from 2 to 3 kilometers wide and 9 kilometers long, was once dotted and bordered with prehistoric sites. North of the river modern cultivation is more extensive; but there is here, at minimum, a 2-kilometer strip now arid or in *monte* growth which was once irrigated. In the Middle Valley, Upper Virú, and the Huacapongo the Valley is much narrower, and there is only a relatively small fallow acreage formerly in cultivation; nevertheless, in almost any part of the Virú drainage dry canal beds, lying above the present watered foliage line, attest to this shrinkage.[14]

An archeological synopsis.—A systematic knowledge of the prehistory of the Virú Valley did not begin to be assembled until the surveys of Larco Hoyle (1938–39) and Bennett (1939), a little over a decade ago.[15] Previous to that time, Virú was known only inferentially through stylistic comparisons with the neighboring valley of Santa Catalina or Moche. The cultural chronology for Moche was first outlined by Max Uhle (1913), who established the relative sequential positions of three major ceramic styles, Proto-Chimu (Mochica), Coast Tiahuanaco, and Late Chimu (Chimu), in that order. Kroeber's (1925 a, 1926 a, 1927, 1930) north coast excavations and analyses of the Uhle collections verified this basic sequence.

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[13] This is an impression based upon a few months' stay. Perhaps Drs. Holmberg and Muelle, who studied the modern Viruñeros for the better part of a year, will disagree with it.

[14] Kosok (1940, p. 176) describes this contraction of prehistoric irrigation systems in other coastal valleys of Perú.

[15] A more detailed summarization of the archeological background of the North Coast of Peru has been included in an earlier Virú program report (Ford and Willey, 1949 b, pp. 13–17).

During this period of field work, Kroeber (1930) made a quick reconnaissance of the Virú Valley, recording several of the major sites and commenting upon their possible cultural connections. It was Bennett (1939), however, who objectively established the sequence of Mochica, Coast Tiahuanaco (Epigonal and Black-white-red Geometric), Chimu, and Inca-Chimu styles in Virú.[16] In addition to these, Bennett defined a new ceramic style, the Gallinazo, which he believed to represent a full period development chronologically intermediate between Mochica and Coast Tiahuanaco. Larco Hoyle (1938–39, 1941, 1945, a, b, c) revised the Uhle-Kroeber scheme in that he held out for an early and distinct Cupisnique (Coast Chavín) Period, and, following the Cupisnique, Larco Hoyle defined a culture which he named Salinar and which, according to his investigations, occupied a transitional position between Cupisnique and Mochica. Gallinazo, treated by Larco Hoyle under the name "Virú," was thought by him to be a culture centering in the Virú Valley, succeeding the Salinar Period. He avoided the question of the chronological relationship of Gallinazo and Mochica, but he suggested that the former might have had a long continuity beginning in pre-Mochica times and continuing until the advent of Coast Tiahuanaco (Larco Hoyle, 1945 b). Except for the Gallinazo, or Virú, culture, which was then known largely from the Virú Valley, Larco Hoyle's investigations were based principally on the Chicama Valley. He made clear, however, that Cupisnique-like ceramics were found in Virú Valley graves (Larco Hoyle, 1945 a) and that a Salinar-type cemetery also gave evidence of that period in Virú (Larco Hoyle, 1944). His chronological synthesis, thus, had a bearing on the Chicama, Moche, and Virú Valleys of the north coast with possible extensions even farther to the north and south.

The stratigraphic and seriational studies in ceramics carried out during the 1946 Virú Valley program to a great extent verified, and in part modified, the culture sequences that had been proposed for the Virú Valley and the north coast.[17] Some of the most important new data pertain to the beginnings of the sequence. Excavations in the Chicama Valley and in Virú revealed two distinguishable periods in the cultural refuse underlying the Cupisnique or Chavínlike pottery. The earlier of these is a preceramic period, the latter a simple

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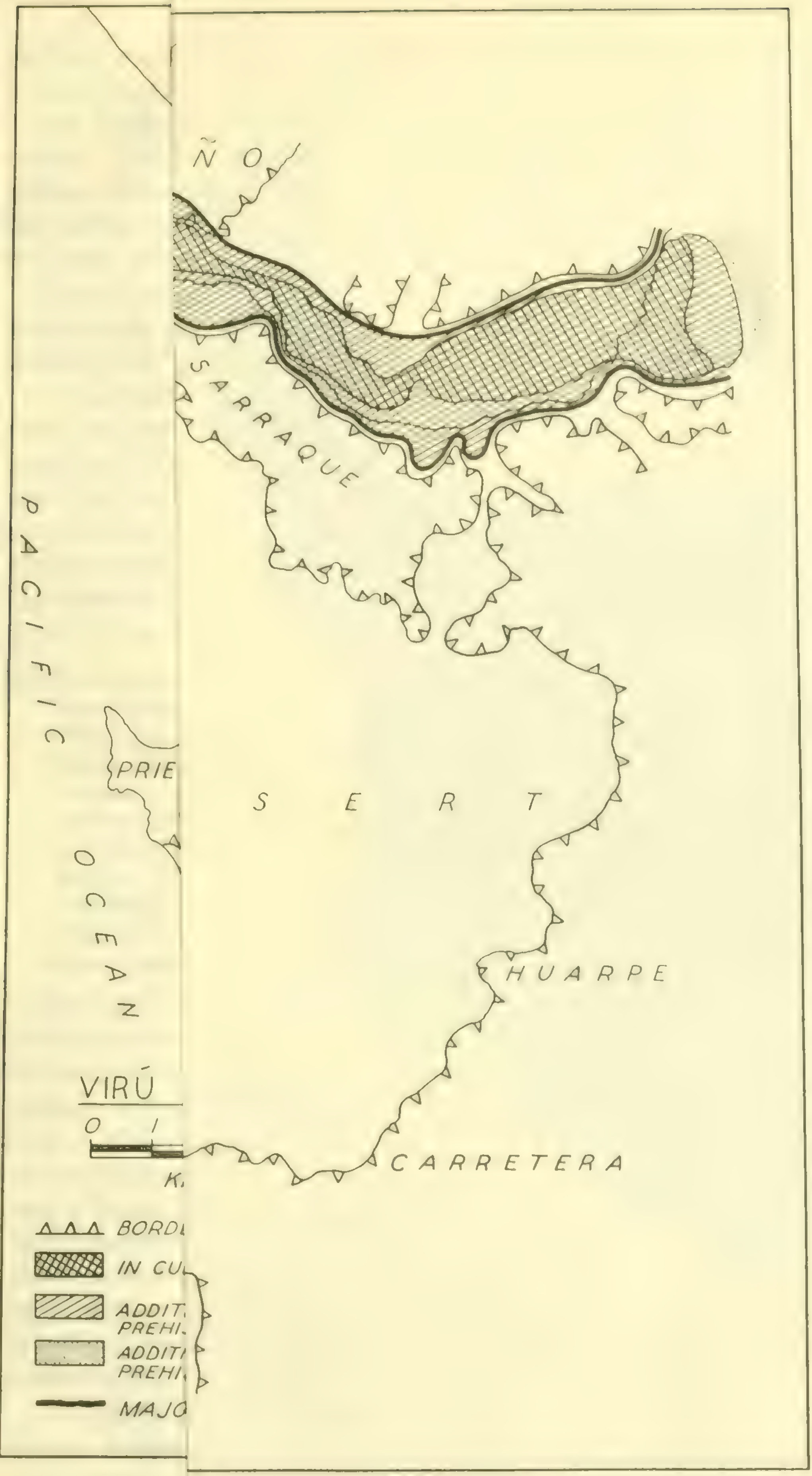
[16] Bennett (1939) records 37 archeological sites in Virú. These 37 have been incorporated into the Virú survey total of 315. Reference is made throughout the text and in the Index of Sites to the specific instances of this duplication.

[17] See Strong, 1948; Bird, 1948 a; Bennett, 1950.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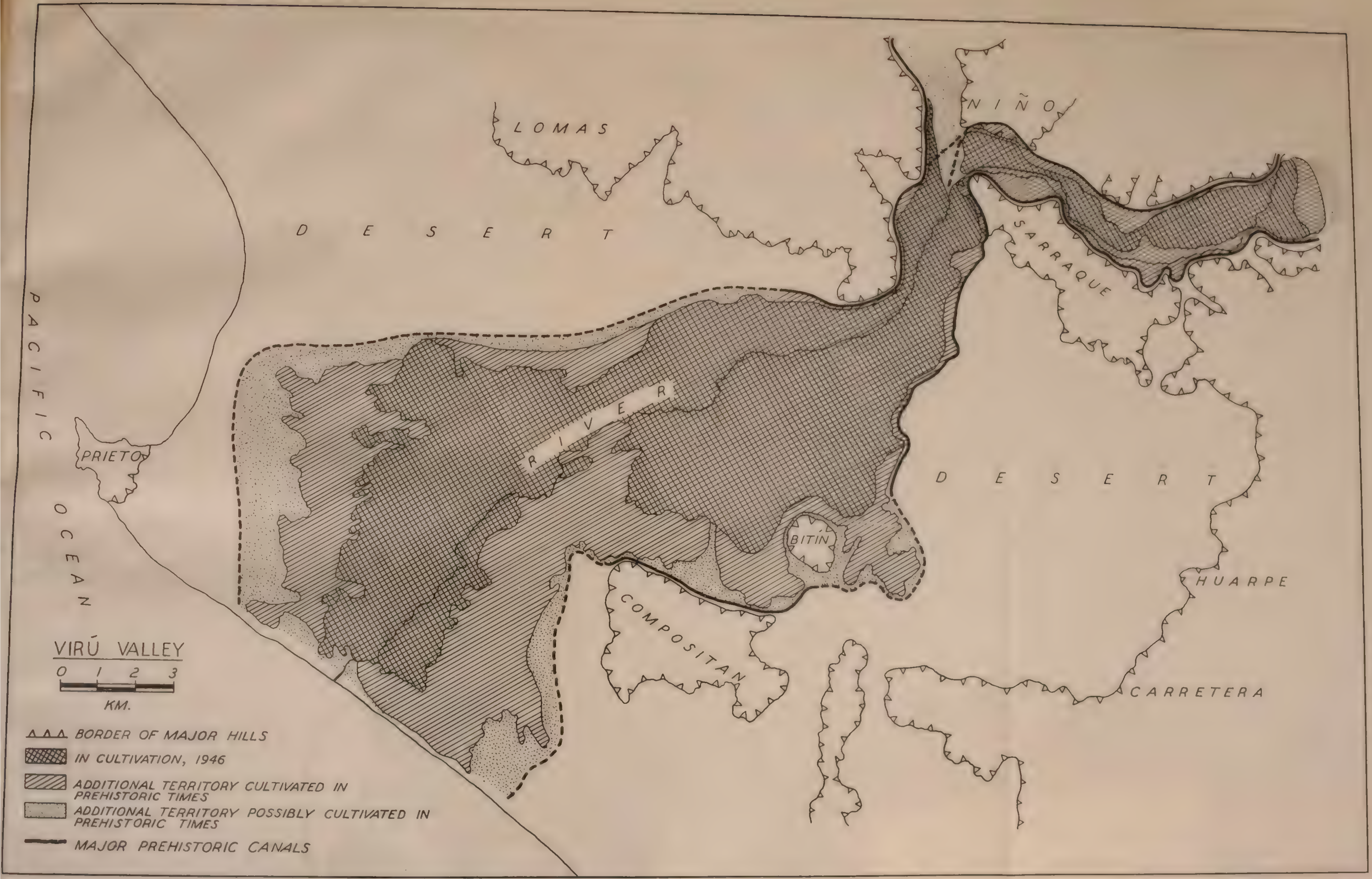
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BORDER OF MAJOR HILLS
IN CULTIVATION, 1946
ADDITIONAL TERRITORY CULTIVATED IN PREHISTORIC TIMES
ADDITIONAL TERRITORY POSSIBLY CULTIVATED IN PREHISTORIC TIMES
MAJOR PREHISTORIC CANALS

FIGURE 4.—Map of Virú showing areas under cultivation in 1946, additional areas cultivated in prehistoric times, and routes of the main prehistoric canals

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or plain ware pottery period. The plain ware interval in the sequence was shown to be followed by Cupisnique, Salinar, Gallinazo, Mochica, Coast Tiahuanaco, Chimu, and Inca-Chimu pottery types in that order. This corroborated Larco Hoyle's early period alinement, revised Bennett's Mochica-Gallinazo relationship with Gallinazo in the earlier position, and confirmed the Uhle-Kroeber chronology for the later periods.

In establishing this sequence for the Virú Valley, the participating archeologists decided upon a local nomenclature for the Valley periods. Although it was recognized that influences outside Virú had exerted an important influence upon the Valley in all periods, the Virú cultures also showed local distinctiveness. Until these degrees of difference and likeness from valley to valley are more fully appraised it was thought best to use names without former archeological connotation except in the case of the Gallinazo culture, which was first described from the Virú Valley. This Virú sequence, as it is used in the present report, and in the other Virú program monographs, is given below with the Moche-Chicama Valley correlates.

Moche-Chicama:	Virú:
Inca-Chimu	Estero.
Chimu	La Plata.
Coast Tiahuanaco (Black-white-red; Epigonal)	Tomaval.
Mochica (Early Chimu)	Huancaco.
Mochica-Negative	Gallinazo.
Salinar	Puerto Moorin.
Cupisnique (Coast Chavín)	Guañape (Middle and Late).
Plain Pottery Period	Guañape (Early).
Pre-Ceramic	Cerro Prieto.

The Cerro Prieto Period of Virú is closely related to the preceramic cultures found at the Huaca Prieta site[18] of the Chicama Valley. Chicama and Virú are the only well-known occurrences of this preceramic culture although there are possible sites in Pacasmayo and Supe. The remains are those of a fishing-and-gathering people who also had some domesticated plants. The sites are concentrated refuse heaps found along the coasts. Their stage of technology was at a "protoneolithic" level. Along with their nonmaize agriculture, they knew twined weaving of cotton fibers, made fish nets, twined baskets, reed mats, and crude percussion-flaked stone scrapers and knives. Dwellings were semisubterranean and lined with stones, mud, or handmade adobes.

The Early Guañape Period in Virú and the Plain Pottery Period at Huaca Prieta de Chicama are closely related developments, perhaps resulting from a similar wave of new influences or peoples arriving on the north coast at this time. The principal innovation is pottery. The earlier Cerro Prieto and preceramic peoples of Chicama had boiled their food with hot stones in gourd or skin containers, but now simple ollas were made and fired. Jet mirrors, bone weaving tools, and a few shell and bone beads appear. In fabrics, true weaving is present in small quantities. There is no impressive architecture, and the dwellings are much the same as in the pre-Ceramic Period. The general impression is that site ecology and food economy are unchanged. Despite the entrance of new elements, the Early Guañape phase maintains a strong continuity with the past.

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[18] Huaca Prieta ("the black ruin") of Chicama is not to be confused with Huaca Prieta de Guañape. Both are stations of the north coast preceramic culture; but the latter, in Virú, is also the type site of the Guañape Period which is represented in its upper levels.

Middle and Late Guañape retain some of the old traditions, but there is a new impact that sets into motion a series of changes. Cultivated maize was introduced, and, with this, living sites moved away from the coasts into the valley interiors. Along with maize came a sophisticated art style expressed in both ceramics and the carving of stone and bone. The Chicama Valley was an important center for the establishment of this new culture where it is called Cupisnique, but the art style, generally referred to as Chavín, has a distribution throughout the north highlands and coast of Perú and extends as far south as Ancón on the central coast. This "Chavín horizon" (Willey, 1945) marks the beginning of the Formative Stage[19] of culture development in the Central Andean area. In spite of the unity of the Chavín art style and certain associated basic technologies, there are significant regional differences. An early metallurgy is associated in the Lambayeque Valley at Chongoyape, megalithic carved monuments and galleried platform structures of stone in the highlands, and stone and adobe mounds or platforms in some of the coastal valleys. Substantial pyramids are reported from the Chicama Valley and from the Nepeña and Casma Valleys to the south of Virú, but in Virú, itself, we have no evidence for such structures. Virú architecture of the Middle and Late Guañape Periods is characterized by above-ground small houses, large rectangular but simple "temples," and the use of crude stone masonry.

The Puerto Moorin Period of Virú, divided into Early and Late phases, introduces a new pottery tradition in that oxidization is standardized and black-fired ware disappears. The ceramic decoration is rather simple. Whereas incision and a number of plastic techniques were dominant in Guañape-Cupisnique, white pigment on a red ground is the hallmark of decorated Puerto Moorin and the related Salinar style of the Chicama Valley. Chavín art of the feline cult disappears, and the wider relationships of Puerto Moorin are with the "white-on-red horizon" (Willey, 1945). I have used the designation Late Formative for this stage as it applies to Perú as a whole. Bennett (Bennett and Bird, 1949, p. 137 ff.) has named it the "Experimenter Period" to emphasize the "experimentation in new techniques and new controls" in agriculture, crafts, and building. A number of new food plants appear. Metallurgy begins to diffuse and, in the northern coastal valleys, at least, there is a possibility of experimental irrigation. In Virú, it is the time of a great population increase and of the first building of pyramidal mounds in stone, earth, or conical adobes. Individual villages are about the same size as in previous periods, but houses and rooms tend to be clustered or conjoined rather than scattered. Some large-scale fortifications were built on hilltops.

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[19] Called the "Cultist Period" by Bennett (Bennett and Bird, 1949, p. 123) and the "Evolutive Epoch" by Larco Hoyle (1948).

The Gallinazo Period, subdivided into Early, Middle, and Late phases in Virú, represents a continuation of the experimental trends in technology of the Puerto Moorin Period but with a definite Late phase crystallization into a Peruvian Classic Stage[20] culture. The Peruvian Classic Stage is the period of brilliant regional cultures such as the Mochica, Early Lima, Nazca, Classic Tiahuanaco, and Classic Recuay. In Virú, the dominant decorated pottery is negative painted, and there are strong stylistic connections with the negative painting of the Callejon de Huaylas and the Recuay culture. Negative pottery is also found in the Chicama Valley where it may represent a pre-Mochica Period; however, the north coast center for the technique is Virú or, possibly, the Santa Valley. For Virú, the Gallinazo Period was the time of the great constructions, of the achievement of a population maximum for the Valley, and of the installation of the master canal and irrigation systems. Clustered or agglutinated communities, like those of Puerto Moorin, were typical, but they were much larger than before. Toward the close of the Late phase strong Mochica influence is seen in Virú ceramics and, probably, in architecture.

The Huancaco Period in Virú is the time of the Mochica cultural domination of the Valley. The Gallinazo ceremonial or decorated ware styles are immediately terminated and replaced by pottery which could have been made in the Chicama or Moche Valleys. The Mochica hearth seems to have been in the Chicama-Moche region where, except for a short Negative Painted Pottery Period, it probably had a developmental history paralleling the growth of Gallinazo in Virú. Mochica influence is confined to the coast but is found in great strength as far south as Santa and in appreciable amounts beyond this to the Nepeña Valley. Northward, its terminus was the Pacasmayo Valley, above Chicama, although modified influences are seen in Lambayeque.

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[20] Bennett (Bennett and Bird, 1949, p. 153 ff.) calls this the "Mastercraftsman Period," emphasizing the culmination of technological control. Strong (1948) uses the term "Florescent," and Larco Hoyle (1948), *"Auge."*

Its influence in Virú, aside from the symbolic changes in the arts, is seen in a great pyramid-dwelling-palace construction in the southwest part of the Valley from whence the name Huancaco is derived. Some adobe pyramids and castillos were built at other sites in the Valley, but the amount of construction work does not compare with that of Late Gallinazo. In many cases, there is evidence that the Mochica took over and occupied important public buildings that had been constructed during the Gallinazo Period.

Temaval stylistic influence, particularly as seen in pottery, follows the Mochica dominance in Virú with the same obliterative quality that characterized the Mochica ascendancy over Gallinazo. Tomaval is the period of the "Tiahuanaco horizon" in the Virú Valley, and, as such, it correlates with the Tiahuanaco graves found at the Moche pyramid and the Tiahuanaco influences in the Chicama. There is some red, white, and black painted pottery which is similar to that found throughout much of Perú at this time. There is also another new ceramic influence in the Tomaval Period as seen in the relief-decorated or pressed ware. This pressed ware, both red and black, is a northern coastal tradition, and its presence casts some doubt on the direction from whence the "Tiahuanaco" invasion came. Throughout most of Perú, this time of the Tiahuanaco horizon was probably one of radical change and social and political upheaval and unrest. The name "Expansionist" has been applied to the stage. Its impress in Virú was profound not only in ceramics and art but in other phases of the culture. A new type of site appears. This is a walled enclosure of considerable size. The largest ones are subdivided into only a few huge compartments, but the smaller ones have some small rooms. Interior courtyards and galleries are characteristic, and in some there are small platform mounds. It is probable that some Pyramid Mounds were built in the Tomaval Period, but it is more likely that they re-used earlier mounds of the Puerto Moorin, Gallinazo, and Huancaco Periods. Tomaval cemeteries are often found near the great public buildings of the previous periods, but there is little sign that these castillos or big Pyramid-Dwelling Complexes were extensively used.

La Plata is the Chimu Period in the Virú Valley. There is the predominance of black ware that characterizes other Chimu sites of the north coast and a continuation of the architecture of Tomaval. The Chimu state may have extended from Lambayeque to Paramonga, and the distribution of the Chimu-type black ware is even greater than this. Bennett (Bennett and Bird, 1949, p. 201 ff.) has referred to this general stage of Peruvian prehistory as the "City Builder Period," in justifiable recognition of the great urban sites like Chanchan and El Purgatorio. I would see it as a continuation of the Expansionist Stage. There are no great "cities" in Virú. If our dating is correct, the biggest of the enclosures were built in the Tomaval Period. We know that at least one of them was occupied throughout the La Plata interval, and it is likely that some of the others were also continuously inhabited. The smaller compound villages or enclsoures that are identified as having been built in the La Plata Period are very similar to those of Tomaval. There is a definite decline in pyramid building and structures of the castillo type. One curious feature of the La Plata Period is the decline in the number of sites and the implication that this reflects a drop in total Valley population.

The Estero Period is the Inca conquest of the Chimu province of Virú. There are few sites which are dated as Estero in the Valley as the ceramic definition of the Estero Period was based upon the presence of Inca Polychrome sherds, and these were rarely found. Most of the Estero sites had been occupied in the La Plata Period, and little useful distinction can be made between the two periods. With the coming of the Inca, in Virú as elsewhere, we have the final phase of the Peruvian Expansionist Stage.

Chronological scales: absolute and relative.—Absolute dating in Peruvian archeology has, until very recently, been almost wholly in the realm of guess-reckoning. At the upper end of the chronology there have been some carefully reasoned, but still questionable, dates based upon the early Peruvian chroniclers (see Rowe, 1945, 1948). Back of these estimates has been speculation. For a quarter of a century most North American scholars followed a rather compressed scheme of guess-dates which went back to Uhle's day and was, obviously, conditioned by the disinclination of Middle American students to push their beginning dates back of the year 1 A. D.[21] According to these reckonings, the Chavín horizon was no earlier than the start of the Christian Era. In contradistinction, both Larco Hoyle (1948) and Tello (1940, see chronological chart) have held that the Cupisnique and Chavín cultures belonged to the first millenium before the Christian Era. Recently, their views have begun to prevail. Bennett's absolute dates (Bennett and Bird, 1949, fig. 19; see also Strong, 1948, p. 98) for the north coast and Virú, as presented in the recent American Museum Handbook, show this trend toward expansion:

Moche-Chicama:	Virú:	*Date (A. D.)*
Inca-Chimu	Estero	1450–1532
Chimu	La Plata	1200–1450
Coast Tiahuanaco	Tomaval	1000–1200
Mochica (Early Chimu)	Huancaco	700–1000
Mochica-Negative	Gallinazo	300– 700
Salinar	Puerto Moorin	0– 300
		(*B. C.*)
Cupisnique (Coast Chavín)	Guañape (Middle and Late	1000– 0
Plain Pottery Period	Guañape (Early)	ca. 1000
Pre-Ceramic (Early Farmers)	Cerro Prieto	3000–1000

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[21] Some of the latest of these "compressed" chronologies are by Willey (1948, p. 9) and Bennett (1946, p. 80).

Since this chronology was published carbon-14 dates (see Arnold and Libby, 1950) on certain Peruvian archeological specimens from the north coast have been released. In a recent paper, Junius Bird (n. d.) has arranged these carbon-14 dates into sequence and commented upon them. Most of the specimens were gathered by Bird, himself, in his excavations at the Huaca Prieta de Chicama, and they are wood, textile, and carbonized materials found in stratigraphic contexts of the pre-Ceramic, Plain Pottery, Cupisnique, and Negative Painted Pottery Periods of those excavations. In addition, there is a Mochica date from an ash and bone specimen recovered from the base of the Huaca del Sol, Moche, by George Kubler. These carbon-14 dates have a direct bearing upon the dating of the earlier periods of the above sequences. Indirectly, they also modify our thinking about the time limits of the later periods if they are assumed to be correct.

Carbon-14 Dates of Early North Peruvian Periods

	B. C.
Mochica (found with "Early Mochica" potsherds)	373
Negative Painted Pottery Period (beginnings of this deposit)	524±141
Cupisnique (first appearance of maize, Cupisnique pottery)	848±167
Plain Pottery Period (close of pre-Ceramic, first appearance of pottery)	1200
Pre-Ceramic (basal deposit date of prepottery, agricultural midden)	2474±104

The beginnings of the pre-Ceramic, agricultural occupation at Huaca Prieta de Chicama, placed at 2474 B. C., do not conflict with any previous guess-date estimates, and the only comment that seems necessary is that the Virú Valley Cerro Prieto Period had its inception sometime after this date and before the appearance of plain pottery. The date of 1200 B. C. for the first appearance of pottery corresponds very well with previous guess-estimates. This would be the beginning date of the Early Guañape Period in Virú. Cupisnique at 848 B. C., also a beginning date, is amazingly close to Tello's, Larco Hoyle's and Bennett's guesses. So far all is well. The 848 B. C. date would, presumably, mark the approximate beginning of Middle Guañape. The first shock is the date for Bird's Negative Painted Pottery deposit. This was a rope specimen in a stratigraphically secure position where beach boulders had sealed off the earlier cultural deposits. The associated pottery sherds were of types corresponding to the Early Gallinazo phase of Virú. But the date of 524–141 B. C. is startingly early. For one thing, the Salinar, or White-on-red Period, which was not represented in Bird's stratigraphy, is believed to be intermediate between Cupisnique and the Negative or Gallinazo-like horizon. Only 300 years are allowed by these dates for the chronological ranges of Cupisnique or Coast Chavin and the subsequent full-time span of Salinar. Following on the heels of the Negative or Gallinazo date, the figure for Early Mochica is even more of a jolt. The submound specimen from the Huaca del Sol is 373 B. C. This would place a low ceiling on the Gallianzo culture in the Chicama Valley, allowing it less than 200 years. In Virú, where Mochica does not appear until its later phases of development, such would not be the case; but one would still expect an earlier arrival of Mochica influence in Virú than that estimated by Bennett at A. D. 700, a full 1,000 years after the beginnings of that culture in the neighboring valley of Moche. If the initial Mochica (or Huancaco) date for Virú is lowered substantially below the A. D. 700 guess-figure, then the duration of Huancaco and of the subsequent Virú periods must be lengthened substantially. This compression of Salinar-Puerto Moorin and Negative-Gallinazo, with the complementary lengthening of Mochica-Huancaco and the post-Mochica-Huancaco Periods, does not jibe with estimates of period time spans made on a relative basis for Virú.

The Virú relative chronology is based upon refuse heap stratigraphy and horizontal seriations. The periods and phases were defined essentially upon undecorated utilitarian ceramics as these bulked largest in the living refuse; however, these plain wares were integrated with the better-known decorated styles which had served as the chronological marker types since Uhle's first north coast studies. The relative time duration of the respective periods and their subdivisions was formulated by Ford (1949, figs. 4, 5, and pp. 48–49). This measuring of relative time was accomplished by comparing average refuse depths from the excavations. The method is not infallible as there are many factors, other than time, which will affect the accumulation of cultural debris; nevertheless, it was noted that the refuse strata of the earlier periods, particularly Guañape and Gallinazo, were usually much deeper than those of the later periods.

Ford's time-depth scale is marked off into lettered intervals. For Guañape, there are three such intervals, "time N–M" (Early), "time M–L" (Middle), and "time L–K" (Late); Puerto Moorin has two, "time K–J" (Early) and "time J–I" (Late); and Gallinazo has three, "time I–H" (Early), "time H–G" (Middle), and "time G–F" (Late). These eight intervals, subdividing the three periods, are each allowed an equal span of time on the chart (Ford, 1949, figs. 4, 5), and we will refer to these spans as "time units." Guañape has three time units, Puerto Moorin two, and Gallinazo three. The vertical time line for the Huancaco Period is but half of a standard time unit. Thus, the Huancaco Period, Ford's "time F–E," is computed as being only one-half as long as one of the preceding subperiods, and, theoretically, had only one-sixth the years attributed to Gallinazo. Tomaval, "time

E–D," is assigned approximately two-thirds of a time unit; La Plata, "time D–C," one-half a unit; and Estero, "time C–B," two-thirds of a unit.

In comparing this to Bennett's guess-dates, we see that, if 1,000 years is allowed the Guañape-Cupisnique Period, between 600 and 700 are due Puerto Moorin-Salinar, and another 1,000 must be allotted to Gallinazo-Mochica. This would bring us up to A. D. 1600 for the beginning of the Tomaval Period, so it is clear that we cannot successfully translate the relative time spacing of the Virú periods to what might be considered a reasonable guess-date chronology. With the carbon-14 dates we have equal difficulty. The approximate 400 years between the Plain Pottery Period (Early Guañape) date of 1200 B. C. and the 848 B. C. of beginning Cupisnique (Middle Guañape) gives us a standard of about 350 years per time unit as estimated in the refuse depth computations. If we apply this to Middle and Late Guañape, we terminate at about A. D. 1; but, here, we run afoul of the 524 B. C. date for Negative-Gallinazo. At the rate of 350 years per time unit, or even 200 years, there is no room to crowd the two remaining time units of Guañape and the two units of Puerto Moorin into the interval between 848 and 524 B. C.

To conclude, the time estimates scaled to refuse deposition cannot be successfully correlated with previous guess-dates or with carbon-14 absolute dates. I am of the opinion that Ford is right in considering the earlier Virú periods to be much longer than the later ones, and there is reason to believe that the sudden shortening of the periods occurs where he places it, at the close of the Gallinazo Period. I doubt, however, if the differential is as great as he has scaled it. As to carbon-14, I am loath to accept some dates, because they seem to "fit" preconceived ideas, and to reject others, because they do not. Of all those discussed, the Mochica date from the submound level at Moche is surrounded by the greatest number of external factors leading to doubt.[22] A submound deposit, in spite of the associations of certain potsherds, could be a mixture of earlier and later material. But discarding the Moche date does not help us much. There is still the Early Negative date from the upper deposits of Huaca Prieta de Chicama to serve as a stumbling block. It, too, must be disregarded, and this is more difficult to rationalize.

For the present, until more carbon-14 dates are checked against more stratigraphic sequences, I will patch up another guess-dating with an eye on arguments and results given this far. This chronology will show a greater time range for early than for late periods but will not emphasize this to the degree that Ford has done. It will also allow a somewhat greater span for the Puerto Moorin and Negative Periods than that assigned in Bennett's estimates.

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[22] Kubler (1948, pp. 29–50), in guano "varve" estimates, has offered a midninth century (A. D.) date for Mochica, over 1,000 years removed from the C–14 specimen collected on the same culture.

Virú Chronology

	(A. D.)
Estero	1470 to 1532
La Plata	1300 to 1470
Tomaval	1000 to 1300
Huancaco	800 to 1000
Gallinazo (Early, Middle, Late)	0 to 800
	(B. C.)
Puerto Moorin (Early and Late)	400 to 0
Middle and Late Guañape	900 to 400
Early Guañape	1200 to 900
Cerro Prieto	? to 1200

THE PREHISTORIC OCCUPATION OF VIRÚ

THE CERRO PRIETO PERIOD

PERIOD DEFINITION

Cerro Prieto, as a prehistoric period of the Virú Valley, is defined, for our purposes of sequence and dating, by its absence of pottery. There is a meager trait list for the period, such as the architectural and settlement remains discussed here, resulting from the excavations of Strong and Evans (personal communication) and from Bird (1948 a, b). The cultural alliance of Cerro Prieto with Huaca Prieta of the Chicama Valley has been advanced by Bird, and this has provided a substantial basis for filling out the Cerro Prieto picture. We have drawn upon these data for our archeological reconstructions of this report.

It is likely that the Cerro Prieto Period was a long one, and it may, eventually, be subdivided. For the present treatment we can, however, regard it most conveniently as a single time unit.

SITE DISTRIBUTION

There are three definite and two possible sites of this cultural period known in Virú Valley (fig. 5). The first three are all in Lower Virú-North, near the sea. The doubtful sites are in Lower Virú but lie some 7 or 8 kilometers inland, near the center of the Valley. Of the sites near the beach, one was excavated by Strong and Evans and later by Bird. The doubtful sites were both excavated by Collier.

It is extremely difficult to estimate the reliability of the site sample for this period. As the culture is a pre-Ceramic one, the absence of the pottery diagnostic undoubtedly militated against the discovery of sites of this period. Refuse areas with no pottery tended to be overlooked; and sites which showed pottery components of later periods may have been occupied during Cerro Prieto times, although this fact could not be diagnosed from surface surveys. A second complicating factor is valley floor deposition. Sites of this earliest known period would, of course, be those which were buried deepest beneath alluvial soils in the Middle and Lower Valley bottoms, and would, thus, escape detection. Sites V-302 and V-171, in which possible pre-Ceramic refuse levels were located at a depth of several meters

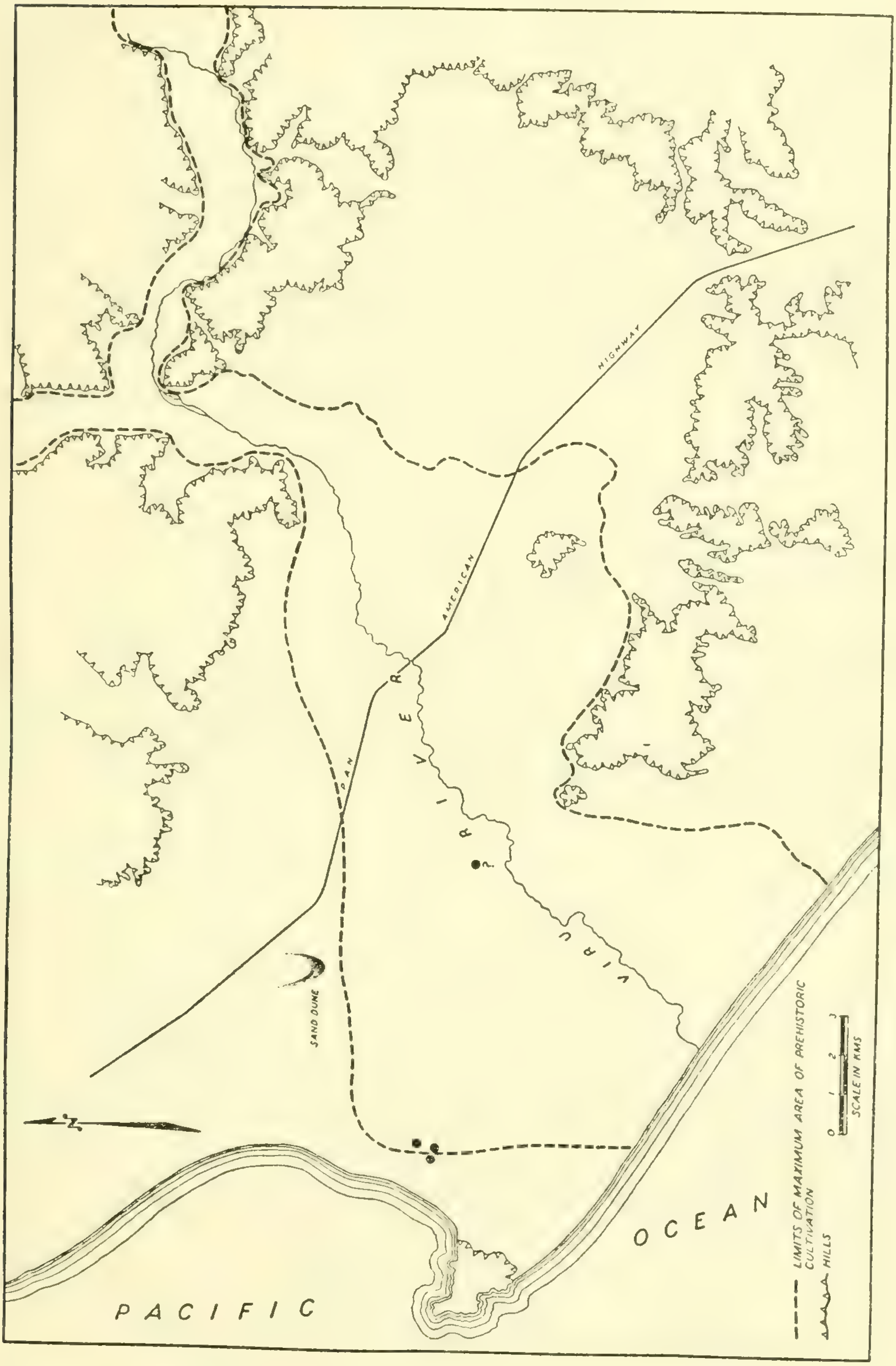
PACIFIC
OCEAN
VIRU
RIVER
PAN
AMERICAN
HIGHWAY
SAND DUNE
?
?
N
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS

FIGURE 5.—Site distribution map of the Cerro Prieto Period.

below the present Valley floor, suggest that there may have been several such sites, now covered, in this part of the Valley.

In spite of these factors which undoubtedly complicate the sampling, it does not seem likely that the number of pre-Ceramic or Cerro Prieto Period sites was large. The fact that the concentration of the three definitely known sites is near the coast, combined with the nature of the refuse in these sites, argues for a predominantly coastal rather than an inland occupation pattern during the period. The abundance of shell detritus in these sites, as opposed to the limited shell content in sites of the ceramic periods, attests to the relative importance of a marine economy. Some agriculture was probably practiced, but this could have been achieved nearby the coastal sites as it apparently was in the Chicama Valley at this same period. In the light of these considerations it is most probable that population was concentrated near the sea, in Lower Virú-North, during the Cerro Prieto Period.

SUMMARY OF SITE TYPES

All known sites of the Cerro Prieto Period are dwelling locations or simple refuse deposits implying habitation.

Architectural patterns are known from one site (V–71). These are small, conjoined rectangular rooms with thin walls of puddled adobe. No extensive arrangement of the rooms was determined, but at least three were conjoined to form a unit. The houses with the thin, puddled adobe walls were found to be superimposed over earlier rooms which had been subterranean dwellings with hand-made, rectangular adobe walls.

The midden accumulations are large, black-earth-and-ash refuse heaps averaging 200 meters or more in diameter and standing as high as 10 meters above the plain.

There is no evidence for purposeful mound construction for this period unless it is argued that the accumulation of a refuse hill on which to live is purposeful building activity. There are certainly no known truncated pyramidal mounds of adobe, clay, or stone in the Cerro Prieto Period. Neither are there buildings of unusual size or form that could be interpreted as public or community centers of a religious or political purpose. Nor do we have evidences of fortifications, major walls, roads, or canals.

DWELLING SITES

The three Cerro Prieto black midden hills are:

V–71
V–314
V–315

V–71 (*Huaca Prieta de Guañape*).—This is a large, irregularly shaped hill of black detritus, ash, and shell (pl. 10, *top*) which is located one kilometer inland from the ocean and some 300 meters southeast of the little semiabandoned town of Guañape (Quad A–3, southeast). The terrain is the salt-flat and dune land back of the beach proper, and lies at the northern base of the cape that terminates in the Cerro Prieto rocks. There is now a great area of such dune wasteland intervening between the sea and the thick *monte*, or scrub growth, that borders the present-day cultivated fields. Some of this country, such as that a little farther inland around the Gallinazo site group, was under irrigation at times during the prehistoric past. It is barely possible that agriculture was pacticed as near the coast as V–71 and northward into that section that now lies back of old Puerto Moorin, although there is no evidence for this in the way of ancient irrigation canals or cultivation plots.

The black refuse hill of V–71 has a diameter of between 200 and 300 meters, varying according to its irregularity. At its highest point it rises perhaps 10 meters above the flats and salt lagoons which surround it. In 1946 Strong and Evans made a number of deep test pits at the site, and one of them, near the crown of the hill, carried down to an unfinished depth of 4.25 meters, proceeding entirely through potteryless but otherwise rich human refuse. In another pit, lower down on the slope of the hill, Guañape Period ceramics were encountered to a depth of 3.50 meters, and under this was one meter of nonpottery, or Cerro Prieto Period, refuse. Still other excavations, near the summit of the mound, uncovered three small, conjoined, criblike rooms. The walls of these rooms were made of clay and plastered with *salitre*-impregnated mud. They measured only 8 to 15 cms. in thickness. Floors were made of a similar clay-*salitre* mixture. The rooms average 3 by 4 meters in size.

A few months after Strong and Evans had completed their work at V–71, Bird made exploratory excavations at the same site. This second testing confirmed the results of the earlier digging, and, in addition, also found subterranean houses. These last were similar to the stone-lined, below-ground houses of the Chicama Valley Huaca Prieta site, but they differed in being lined with large, rectangular, hand-made adobes. This difference in house masonry is probably due to specific environmental conditions as the Virú Valley site is located some distance from available cobblestones or boulders. Bird (1948 a, p. 26) found simple clay-walled houses above those made of the rectangular adobes. These clay-walled houses, constructed, apparently, by the crude piling up of masses of wet clay, were similar to those found by Strong and Evans. Bird also describes them as rectangular, and mentions a squarish recess set in the wall of at least one such house.

V–314, V–315.—These two black refuse mounds are also referred to, respectively, as "Huaca Prieta de Guañape." They are located about half a kilometer south and east of V–71 (Quad A–3, southeast). Similar conditions of environment obtain for these sites as they did for V–71. They are slightly smaller, both in height and extent, than V–71, but their composition, black earth, ash, bits of rock, and shell, seems identical. These mounds were not excavated, and no potsherds were found on their surface by Bird, who examined both of them carefully. In this, they differ from V–71, where Guañape Period ceramics were found superimposed over the Cerro Prieto Period levels in some parts of the site. In spite of the lack of more definite evidence from V–314, and V–315, Bird is of the opinion (personal communication, December 1948) that both sites belong to the Cerro Prieto Period.

Additional possible sites.—There are also two locations within the heart of the Valley which may be additional Cerro Prieto Period stations. Both of these sites were excavated by Donald Collier, and the information given here comes from his field notes (Collier, notes, 1946). One is site V–302 (Quad C–4, northwest), an earth mound occupied successively in later periods, and the other is the big adobe-walled site V–171 (Quad C–4, northeast). At both sites non-pottery-bearing refuse levels were found at the bottom of test excavations which had cut through pottery refuse of various later periods. Collier states (letter of December 15, 1948):

> It (V–302) looked like human occupation but there was not a single artifact and not even bits of broken or burned stone. . . . A similar situation existed at V–171 where there was a sandy layer 25 to 50 cms. thick underlaying the lowest pottery-bearing layer. This sand layer rested on a moist clay layer (the water table was probably not more than 50 cms. below) and contained shell fragments, bits of burned clay, and small rock fragments but no artifacts. So both V–302 and V–171 may offer evidence of occupation in the center of the lower valley in Cerro Prieto times, but to be certain I should have dug much more in the lowest levels at these sites; but this would have required removing 4 meters of overburden. . . .

TABULAR SUMMARY OF SITE TYPES OF THE CERRO PRIETO PERIOD

Living sites:	
Midden accumulations	3
Midden accumulations (questionable)	2

THE GUAÑAPE PERIOD

PERIOD DEFINITION

The Guañape Period is defined by the first appearance of ceramics and by the subsequent elaboration of these ceramics. Ford (1949, pp. 61–63, fig. 4) has divided Guañape into three subperiods of equal length. These subperiods have a chronological value equivalent to that of the standard time segmentations on Ford's "pottery yardstick" for Virú. Intervals "N–M," "M–L," and "L–K" represent the three Guañape subperiods.

The Early phase of the period, "time N–M," is marked by the presence of two plain pottery types, Guañape Black Plain and Guañape Red Plain. The ware of each is hard, grit-tempered, coiled, and thin. Control of firing was irregular, resulting in pottery ranging from red to black. In addition to these two types, two decorated styles made their initial appearance: Finger Pressed Thick Rib and Incised Rib (Small).

The Middle Guañape phase, "time M–L," sees the introduction of a series of decorated types: Ancón Fine-line Incised, Guañape Gouged, Ancón Zoned Punctate, Ancón Brushed, Ancón Engraved, Ancón Broad-line Incised, and Ancón Polished Black. Such decorated material represents about 4 percent of the total dwelling-site pottery. The remainder consists of the two plain types which were also found in the Early phase, Guañape Black Plain and Red Plain. This decorated pottery of Middle Guañape is identical to incised, punctated, brushed, and polished ware of the Cupisnique or Coastal Chavín culture period of the Chicama Valley and to the decorated types of Early Supe, Early Ancón, and Chavín de Huántar. It is of particular interest that the deep stratigraphy at Early Ancón also shows an early Plain Pottery occupation preceding a middle interval introduction of the same incised and punctated types (Willey and Corbett, n. d.). Although no actual Chavín-style feline decorations were noted on Middle Guañape pottery sherds, the association of Chavín art motifs with this period, or subperiod, is well-established. In sum, Middle Guañape is the time of the Chavín horizon style or Chavín cult.

Late Guañape, "time L–K," is a period of transition as far as dominant pottery styles and traditions are concerned. All of the decorated types of Middle Guañape disappear in the Late phase. Ancón Polished Black and Ancón Fine-line Incised last slightly longer than the others, but, subsequently, die out. Similarly, but not as abruptly, the plain wares, Guañape Black Plain and Red Plain, go and are replaced by a hard, polished, well-oxidized type, Huacapongo Polished Plain. This Huacapongo type eventually becomes the dominant ceramic strain in the succeeding Puerto Moorin Period. It is likely that Late Guañape is chronologically parallel to the transition between the Cupisnique and Salinar cultures of Chicama, although our lack of ornamental material, such as is found in graves, prohibits definite proof of this.

SITE DISTRIBUTION

There are 18 sites in Virú Valley from which we have recorded Guañape Period pottery (fig. 6). All but four of these are in the Lower Valley.

During the Early phase only the Guañape midden (V–71), near the beach, was occupied. Here, the inhabitants deposited their pottery refuse on top of the earlier pre-Ceramic remains of the Cerro Prieto people.

Middle phase occupation, as we surveyed it, was only slightly more extensive. The Guañape site, proper, continued to be an important center. Site V–100, a kilometer to the northeast, dates from the end of this phase. And, V–2, against the north foothills of Middle Virú, completes the list.

The principal concentration of population during Late Guañape was on the Valley margin, against the Cerros Compositan in Lower Virú-South (V–83, 84, 85, 127, 128). There is another cluster of sites near the river in the Lower Valley (V–272, 302, 306, 309). These would have passed unnoticed if they had not been excavated, as the Guañape Period refuse in each is buried beneath earth and debris of later cultures. The same is true of sites V–171 and V–311. (Neither of these last is placed as to subperiod or phase.) At V–171, Guañape sherds were found at the bottom of a deep stratification. The V–311 location is a riverbank cut at which Guañape potsherds were recovered under silts at 14 to 16 feet (about 5 meters) below the present surface. We are, obviously, confronted with the same problem as for the Cerro Prieto Period. Do numerous Guañape Period sites lie beneath silt and rubbish in the lower central Valley? The evidence available suggests that they do. It also suggests that they might be Late rather than Early or Middle phase sites.

Of the remaining three sites, two are definitely Late phase and are in Upper Huacapongo (V–180) and Queneto quebrada (V–14), respectively. A third is near a small cave or rock-shelter on the edge of Middle Virú-South (V–313).

SUMMARY OF SITE TYPES

Sites of the Guañape Period may be considered under three functional categories: (1) living sites, (2) community or ceremonial buildings, and (3) cemeteries.

The living sites may be further subdivided into "Exposed Dwelling Sites," "Additional Occupation Sites," and "Earth-Refuse Mounds." Exposed Dwelling Sites are those for which we were able to observe some foundation plan or architectural remains. Additional Occupation Sites refer to simple refuse areas. The Earth-Refuse Mounds

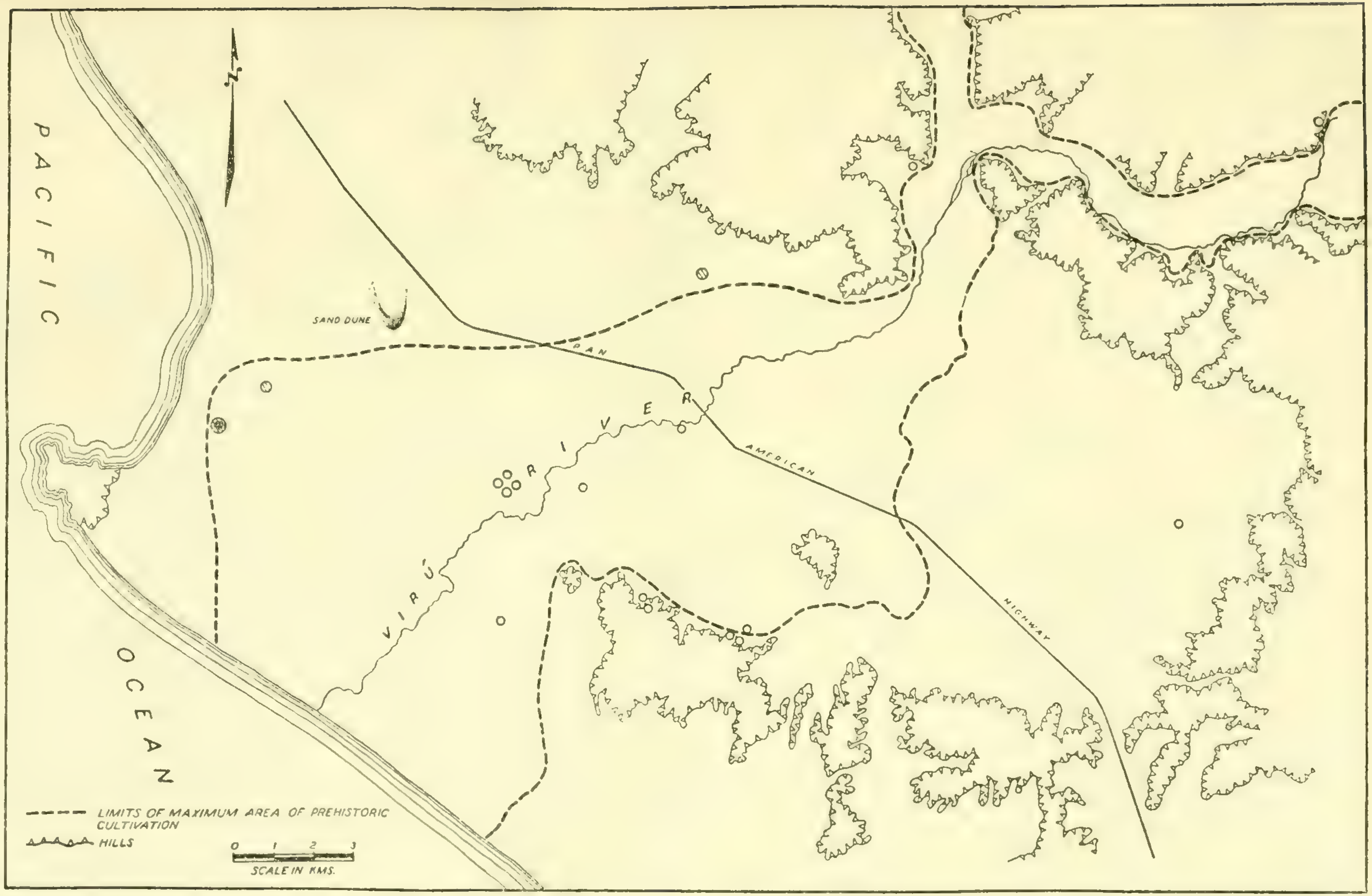
PACIFIC
OCEAN
N
SAND DUNE
PAN AMERICAN HIGHWAY
VIRÚ RIVER
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS.

FIGURE 6.—Site distribution map of the Guañape Period. Early phase, black dots; Middle phase, hatched dots; and Late phase and sites unplaced as to phase, white dots.

are comparable to the latter but contain the Guañape Period occupational level buried beneath a concentration of later earth and trash.

In the Early Guañape phase our only site is V–71, a large midden 200 to 300 meters in diameter. The larger part of this refuse mound probably belongs to the preceding Cerro Prieto Period, but deep patches of midden in its upper levels are Early Guañape.

The Middle Guañape living sites are the two middens, V–71 and V–100. The latter is quite small, being only 50 by 20 meters in area and 75 cm. deep.

In Late Guañape we have foundation plans of two adjoining sites, V–83 and V–85. Both of these belong to a type I have named the "Scattered Small-House Village" pattern. In this type the individual buildings are small, containing from 1 to 6 rooms with 1 or 2 rooms being most typical. The rooms are about 3 meters in diameter on the average but may be as little as 1.50 meters or as large as 5 meters. These rooms may be square, oblong, or ovoid in outline. Some single-room houses are C-shaped with an obvious doorway. The houses may be 2 or 3 or up to 20 meters apart, and they are placed at random. Both sites together could be encompassed in an area 300 meters in diameter. They total about 30 houses which is, in turn, broken down into 70 or more rooms.

The Scattered Small-House Village building foundations are made of rather small, angular boulders. The masonry is double-faced with a small rock rubble core fill. None of the stones are worked and there is no coursing to the masonry. As the foundations are found to consist of only a few centimeters of rock, and as there is very little loose rock nearby, it is assumed that the upper walls of the buildings were made of adobes which have weathered away. Roofs must have been of perishable materials, and we have no evidence for prepared floors.

There are two sets of prepared hilltop or ridge-top platforms on the hill spur just above the Scattered Small-House Village(s), V–83 and V–85. These, because of their size and special situation, may have had special community significance and could have been discussed as "Community Buildings." Each of the two sets consists of two rectangular, rock-walled, earth-filled platforms. In each, there is a larger and higher platform and a smaller and slightly lower attached platform. These platforms vary from 30 cm. to 1 meter in height and from 8 to 3 meters square. They may have sustained buildings, although there is no definite evidence for this. They could have been lookout posts for the villages, temples, or both.

The Late Guañape midden site V–128 covers an area 300 by 50 meters and is situated on a ridge top. There are terracings on the ridge which may have been house platforms, but I saw no building foundations. The other occupation sites of Late Guañape are recognized only as scatterings of potsherds of this period in and around building foundations which, apparently, date from later Virú occupations; or they are buried refuse deposits beneath the small Earth-Refuse Mounds.

The "Community Buildings" of the Guañape Period are so designated because they are larger and somewhat differently constructed than the dwellings which we know for this period. One is placed as Middle phase, the other two as Late. All are large rectangular buildings or enclosures. The Middle Guañape "temple" at V–71 is situated in the midst of the midden area. It has a crudely made but wide stone foundation which defines a rectangle 19 by 15.75 meters. There is some evidence that conical-shaped, hand-made adobes were used in the wall superstructures. The entrance to the rectangle is on the east side, and the entryway steps up, slightly, to the interior floor. An interior platform of rock was built along the north side. This building may, or may not, have been roofed.

The Late Guañape enclosure, or enclosures, at V–127 are on the top of a hill spur adjacent to the V–128 midden of the same period and phase. There are two rock-walled quadrangles. The masonry is typical double-faced cyclopean stonework, similar to that in the houses of V–83–85, except that the walls are thicker. The larger quadrangle is 54 by 24 meters and has an interior division separating it into unequal parts of 20 by 24 and 34 by 24 meters. The dividing wall is made of conical adobes, and it is possible that the outer enclosure wall once had adobes placed upon the stone base. The smaller quadrangle is 18 by 20 meters and the wall of rock.

V–84, the other possible Community Building of the Late Guañape phase, is located upon two low, broad terraces at the foot of a small natural hill. The upper terrace is 21 by 9 meters and is walled with a rock-wall foundation. The lower terrace may once have been so enclosed but is no longer. On the upper terrace there are outlines of two small, rounded-corner rooms, very similar to those of the V–83–85 houses. The top of the small natural hill, against which V–84 is located, has been artificially flattened although there are no wall foundations.

The case for community or special buildings for the Guañape Period is not indisputable. For one thing, our knowledge of the dwelling sites is so limited that we can not be sure that we have the entire range represented in the open or buried midden sites and in the Scattered Small-House Village type. It may be that compound or enclosed dwelling sites were built in this period and that V–127 and V–84 are such sites. If all interior foundations at V–127 had been made of conical adobe, they could very well have been destroyed or so nearly destroyed that I did not see them on the surface. Thus, a series of smaller rooms could have been within the V–127 rectangle. At V–84 there is evidence in stone of some such interior partitions.

But, to balance against these, there is the evidence of the rectangular stone foundation at V–71 whose appearance and uniqueness at that site suggest a special building. The llama burials found within it may be votive offerings. Or could this, and the other community buildings of the period, have been llama corrals?

There are also the hill or ridge-top platforms to be considered. Perhaps, these were the temples for the Late Guañape sites at the south edge of the Valley. Or was their function a defensive one?

Guañape cemeteries have no surface features except where grave hunting has exposed bones and potsherds. Both of those known seem to be isolated from dwelling sites, although we cannot be absolutely sure of this. Perhaps, burials were also made in and around the middens.

EXPOSED DWELLING SITES

There are two house groups that can be identified definitely as Guañape Period dwelling sites on which Guañape structural foundations still stand. Both date from the Late Phase of the period. These are:

V–83
V–85

V–83 and V–85.—These two sites of the Compositan site group were recorded and collected from separately; nevertheless, they seem to make up a single community unit. They are situated on and around the edges of the hill spurs which project out into the Valley from the Cerros Compositan (pl. 11, *center*, *bottom*). These hills help form the south wall of the Valley in Lower Virú-South (Quad D–5, northwest). The ruins lie, today, in a completely desiccated sandy and rocky waste. The edge of the *monte* growth is about half a kilometer down slope, and modern cultivation is almost 2 kilometers distant.

Nowhere on the site, in or out of the houses, is there any accumulation of refuse. A significant number of potsherds were gathered from around the houses. Only the Late Guañape component was represented.

The house remains are exposed upon the surface, only partially covered with a thin layer of drift sand. All that is left are stone house foundations, now almost flush with the surface of the ground. Rather small, angularly fractured boulders were used in these foundations. They were, obviously, obtained from the immediate hills. The walls were of the double-faced type with a narrow core fill of smaller stones. Masonry was cyclopean and the stones had, presumably, been set in mud mortar, although no traces of this are retained. An average width of from 40 to 50 cms. was obtained on most of the houses measured.

A total of from 25 to 30 houses and some 70 rooms were tabulated on the two sites. This can be considered a minimum rather than a maximum number. Many of the house foundations had been partially destroyed, apparently by the flash flooding that accompanies the rare but disastrous rains of the Peruvian north coast. In view of this, the occasional alinements of stones, seen here and there on the site, may have once been other houses or house groups.

The houses were arranged at random with reference to each other and spaced at intervals of 2 to 20 meters. The larger (V–83) part of the combined site is built around the base of a hill spur, the houses being on the desert floor at the foot of a little promontory (fig. 7). All

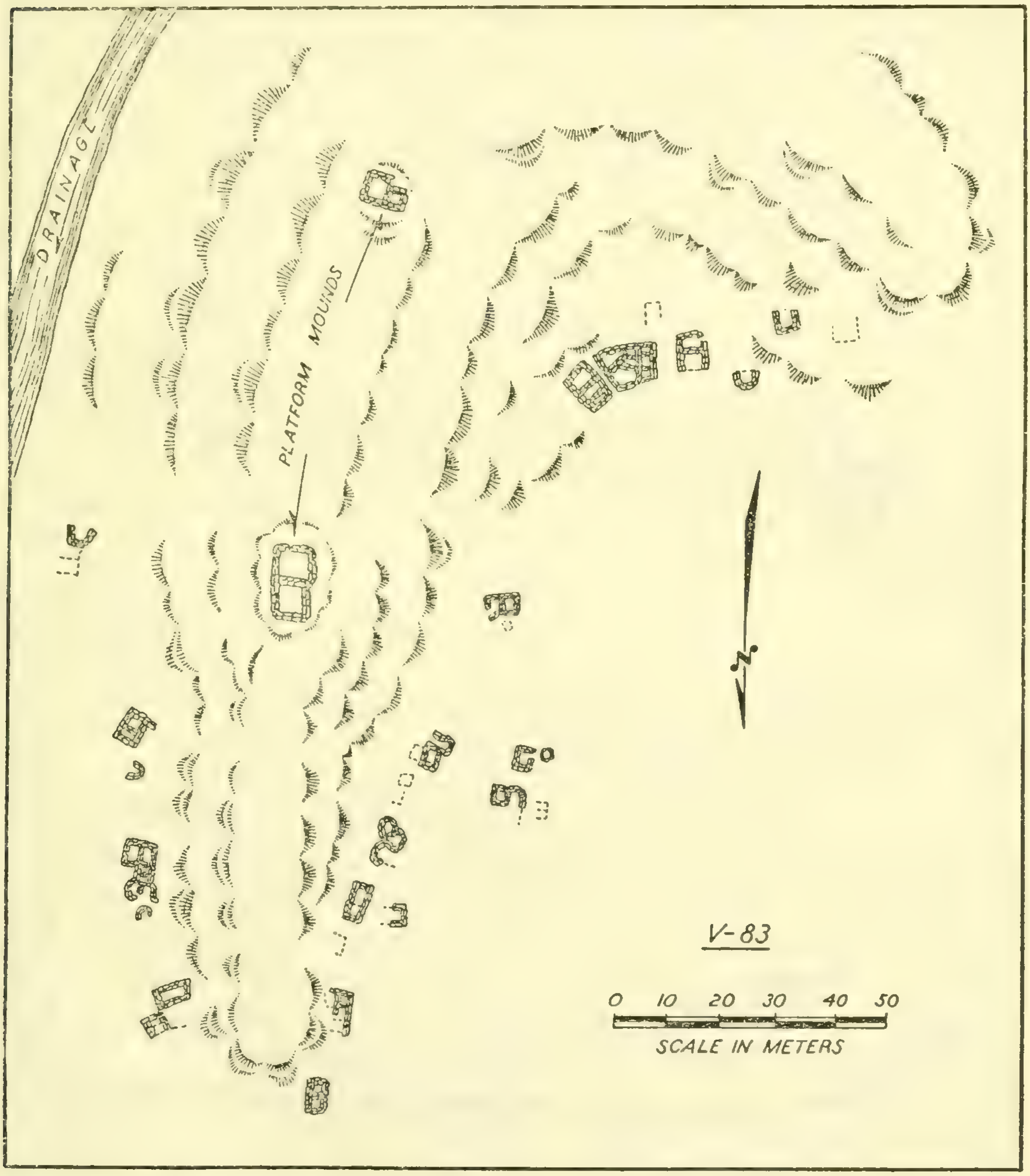

FIGURE 7.—Site V–83 ground plan. The small rock-walled platforms on the hillcrest are earth-filled. Late Guañape Period.

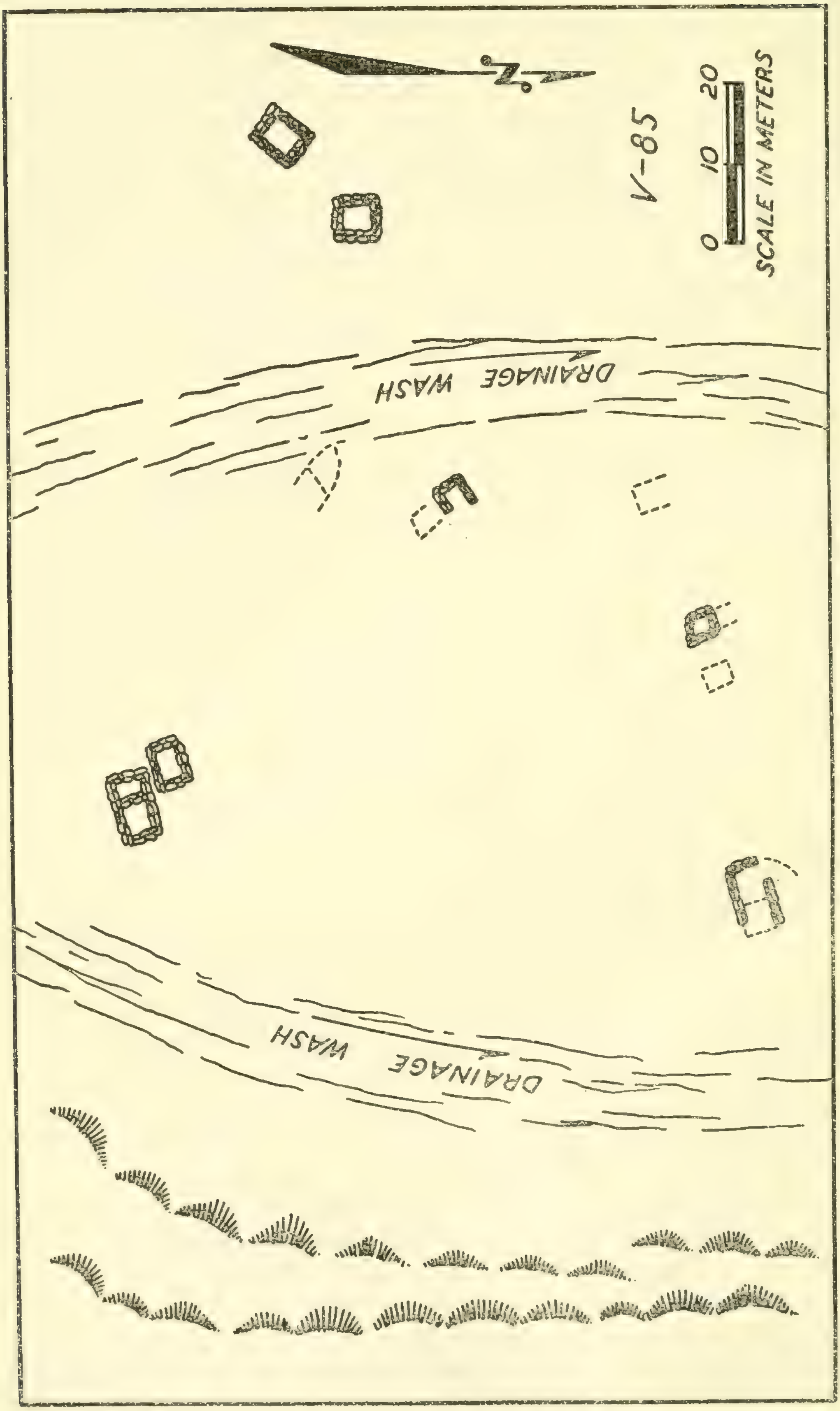
V-85
0
10
20
SCALE IN METERS
DRAINAGE WASH
DRAINAGE WASH

FIGURE 8.—Site V-85 ground plan. Foundations are on old outwash plain cut by drainages. Late Guañape Period.

buildings fall easily within a radius of 100 meters. V–85 (fig. 8) is comprised of a group of houses lying 50 to 125 meters to the east of V–83. This part of the community had been built between two hill spurs, that of V–83 and an unoccupied one farther east. The area between the spurs had served as an erosion trough during flood times, and some of the houses in this group have probably been completely destroyed.

The individual house foundations are small. Each house unit is composed of from one to six rooms with the average at about two rooms. Most buildings and rooms are more or less rectangular although there is a tendency for many of the houses to have rounded corners. Some few rooms are more circular than rectangular. A number of rooms, both standing singly and as part of multiple-roomed houses are C-shaped. It is possible that these are partially destroyed foundations, although I am inclined to think that they may have been bases for open-sided rooms or houses. In general, the joining of room to room is poorly and unevenly done. Quite often rooms will not have parallel sides. Individual rooms vary in size from those measuring about 4 by 5 meters to others only 2 meters square. Most of them are large enough to have served as living or sleeping quarters, although there are a few that would have been fit only for storage. There is little available information at these sites as to what type of floors or superstructures these house foundations maintained. Excavation in one of the rooms revealed the sterile hardpan of the Valley slope within a very few centimeters of the surface. Prepared floors, if they once existed, have long been destroyed by flooding. Concerning superstructures, the relative scarcity of rock lying about the ground near the foundations makes it seem unlikely that the walls were built to full height of stones and mortar. This is a possibility, but it is more probable that the upper walls were made of adobes which have long since disappeared. Roofs were probably perishable pole and thatch or cane affairs.

Two additional features of the site group have not been mentioned. These are rock-walled platforms of earth and rocks which are situated on the top of the ridge around which the houses of V–83 are clustered. Each of the platform complexes consists of two rectangles or platforms. The individual rectangles range from 8 to 3 meters square. In each platform complex one rectangle or platform is larger and somewhat higher than the one attached to it. Height of the platforms is not great, varying from 30 centimeters to 1 meter above the natural ground surface. These platforms may have sustained no buildings; or, on the other hand, they, too, may have been foundations of houses which were built of adobes or of perishable materials. Their location on the ridge, as distinct from the other buildings on the

Valley floor, suggests that they were not ordinary houses. They may have been shrine or temple sites, or they may have served as small fortifications or places of lookout.

Additional occupation sites.—Besides the two sites on which we can definitely identify house remains of the Guañape Period there are nine locations which were inhabited during the period but for which we have no clear-cut evidence of dwelling types. These are:

V–14
V–71
V–100
V–128
V–133
V–171
V–180
V–311
V–313

Of all of these V–100 and V–128 are pure sites. Surface and small test-pit collections from V–100 are classified as Middle Guañape. It is a small, open midden site about two kilometers from the beach and at the edge of the *monte* in Lower Virú-North (Quad B–3, northwest) (pl. 11, *top*). The deposit forms a small, circular mound about 50 by 20 meters in extent. At the crown, in what was apparently the deepest portion, a small test hole encountered sterile sand at 75 cms. below surface. The refuse is of a slightly darker color than the surrounding sand of the desert and is mixed through with crushed shell. Potsherds were found throughout the deposit. There are no structural evidences of any sort.

Site V–128 (Quad C–4, southeast) is located in Lower Virú-South on the margin of the Valley.[23] It occupies a hillcrest for a distance of 300 meters. The site area on the crest is about 50 meters wide, and there are two or three terraced sections which look like purposeful dressing of the ridge. The surface of the site is scattered with weathered rock, shell, and sherds . There is some slight evidence that graves were once excavated here, possibly of the same period as the midden.

Site V–71 (Huaca Prieta de Guañape) is, of course, the major pre-Ceramic site of the Valley (Quad A–3, southeast). On some parts of the site there is deep rubbish of the Early and Middle Guañape Periods. One test cut, 4.75 meters deep, which Strong and Evans made at the site, showed 3.50 meters of sherd-bearing detritus overlying the pre-Ceramic levels. All of the pottery types from this refuse were of the Guañape Period. The stone foundation of a large building, belonging to the Guañape Period, was also excavated at the site but is described under the heading of Community Buildings (pp. 55–57).

The absence of any house foundations at the V–71 and V–100 midden sites is probably due to the fact that stone is quite scarce in this particular section of the Valley. Such buildings were probably made of adobe and/or wood, and have perished in the rains and steady blasts of the wind-driven sands.

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[23] Site V–128 is listed by Ford (1949, p. 83) as dating from time J–K (Early Puerto Moorin) ; however, his more significant placement of it on the chronological chart (fig. 5) is time K–L (Late Guañape) which we have followed here.

Midden refuse dating from the Late Guañape Period is found in open sites at V–133 (Cerro del Piño, south cemetery) (Quad C–5, northwest) and at V–313 (Quad F–4, northwest). At V–133 there are also graves of the Guañape Period as well as graves of a later period. V–313 is a small cave site, and the Guañape Period refuse is found on the slopes below the mouth of the cave. Both of these sites are small in area.

At V–171 (Sitio Collier) (Quad C–4, northeast) and V–311 (Quad D–3, southwest) Guañape Period refuse was found buried deep below other deposits. At V–171 the overlying materials were all cultural and represent later occupations. There is no way to tell, from available evidence, the general extent of the Guañape community at this site. V–311 is a deep-buried stratum of the Guañape Period which lies beneath river sediments and later occupation layers. Bird, who examined this site in the bank of the Virú River in Lower-Virú South, has reported (personal communication, 1948) that the Guañape sherds came from a level 14 to 16 feet beneath the present ground surface of the Valley floor.

The remaining sites at which Guañape sherds were found are all structures or dwellings attributable to later periods. The presence of Late Guañape material at such sites as V–14 (Quad E–2, northwest) and V–180 (Quad F–1, southeast) may result from an earlier occupation of the same spot by Guañape Period people; or the Guañape sherds found in or around these structures may have washed in from a nearby location during a periodic rain and flood. Either way, it is certain that a Guañape Period site was once in the immediate vicinity. Both of the sites were found on the rocky outwash plains which extend down from the flanks of the hills which border Middle Virú and Huacapongo. Under these conditions none presented any depth of rubbish, and the finding of a mixture of early and late materials on the ground surface or within a ruined house site was to be expected.

EARTH-REFUSE MOUNDS

Four earth mounds contained refuse levels dating from the Guañape Period. These are:

V–272
V–302
V–306
V–309

V–272.—This site is situated on the Valley floor, in the midst of modern cultivated fields, in Lower Virú-North (Quad C–4, northwest). It is apparently made wholly of earth and refuse. The mound measures 75 by 30 meters and is 1.75 meters high. It is gently sloped and partially covered with scrub vegetation. Only a small amount of pottery was available on the surface of the mound, and there were no above-ground evidences of buildings.

Collier, who excavated the site, found Late Guañape sherds at the bottom of the deposit. Later periods overlaid this, and the mound as it stands above the surrounding fields today was, seemingly, built in post-Guañape times.

V–302.—This earth and refuse mound in Lower Virú-North (Quad C–4, northwest), referred to in the preceding section (p. 42) as the lowest refuse levels in the site, appeared to be non- or pre-Ceramic. The mound, today, stands 3.5 meters above the surrounding cultivated fields, and it is 50 by 40 meters in diameter. It is approximately rectangular, but is connected to, or sits toe-to-toe with, a smaller L-shaped earth mound. Together with mounds V–272, V–306, and V–309, it may have formed the sides of a court or plaza surrounded on three sides by mounds. No structures of any kind appeared on the surface.

Collier excavated the site and found a stratigraphy of pre-Ceramic (?); Guañape; Puerto Moorin; Gallinazo; and intrusive Tomaval Period burials. The Guañape layer was a 50 centimeter zone at a depth of 4.25 to 4.75 meters below mound surface. This is a meter or more below the level of the surrounding ground. The situation would seem to be parallel to V–272 in that the mound proper was built in periods later than Guañape. As there has been some aggradation of the Valley floor in the past several hundred years, it may be that a small mound was begun in Guañape times and that, subsequently, the fields have been built up around and higher than its old summit. If, however, such a mound was started in Guañape times it is fairly clear that it was never a large one. Rather than being a mound purposefully made to serve as a substructure to an important building, it is more likely that it started as a simple refuse accumulation and may have been later augmented with *salitre* soil or other additions.

V–306.—This is a small, ovate-shaped mound in the same group with V–272 and V–302 (Quad C–4, northwest). It measures 30 by 40 meters and stands about 1 meter above the surrounding fields. It seems to be composed entirely of earth and refuse. Dating from a surface collection places it as Late Guañape along with later Puerto Moorin and Gallinazo components. Although not excavated it is likely that this site is constructed much as V–272 and V–302. The Guañape levels are probably at or below mound base. Most likely the site is simply a dwelling hillock augmented with *salitre*-laden soil.

V–309.—This earth and refuse mound is 110 meters south-southwest of V–306 (Quad C–4, northwest). Ovate-rectangular in outline, it measures 45 by 30 meters. The height is 2 meters above the surrounding fields. Collier's excavations at the site date it as Guañape, Puerto Moorin, and Gallinazo. The structure and origin of the mound are apparently the same as for V–272, V–302, or V–306.

COMMUNITY BUILDINGS

Explanatory note.—Several structures, apparently dating from this period, were of such a size or were situated in such a way that it was most logical to interpret their original use as that of having served community or public functions. It is possible that these buildings were temples. Two such structures, not included here, were described under the site V–83 and V–85. These were probably platforms for hilltop shrines or fortifications.

The following sites are considered here:

V–71
V–84
V–127

V–71 (*Huaca Prieta de Guañape*).—It was mentioned under the discussion of the Guañape Period refuse levels at this site (Quad A–3, southeast) that the stone foundation of a large building was also discovered. This building has, by pottery association, been dated as of the Middle phase of Guañape. Its size and unusual features almost certainly stamp it as a "Community Building."

The foundation is situated on the northeast edge of the black midden hill (pl. 10, *bottom*). It was about 25 meters distant from the principal straticut which Strong and Evans made in the Guañape Period rubbish. It is also due to their efforts that we have some knowledge of the temple building. The structure, or its remnants, is rectangular, measuring a little over 19 meters east–west by 15.75 meters north–south (fig. 9). The orientation of the east wall was found to be 7 degrees off magnetic north (April 22, 1946). The entranceway was found to be in the center of the east wall. The rock-wall foundation, which averages between 65 and 80 cms. in width, is almost superficial, as its base was found to be less than 50 cms. below surface at any one point. Similarly, the floor of the building, made of packed mud and *salitre*, was of the same shallow depth. The wall construction is interestingly different from the rock-wall foundations of the Late Guañape sites such as V–83 and V–85. Instead of showing careful effort to present two relatively smooth and well-alined faces, with small spalling and rubble chinking in the interstices, the rocks in the V–71 temple wall foundation had been carelessly arranged and not closely fitted. Mud mortar was used in abundance presumably to achieve a smooth wall effect, rather than carefully alined stones.

The entranceway is a narrow passage in which are set three steps leading up to the interior floor which had been, originally, higher than the outside ground level (pl. 10, *center*). Along the center of the north wall are the remains of an interior platform of rock. No other features, with the exception of two llama burials found against

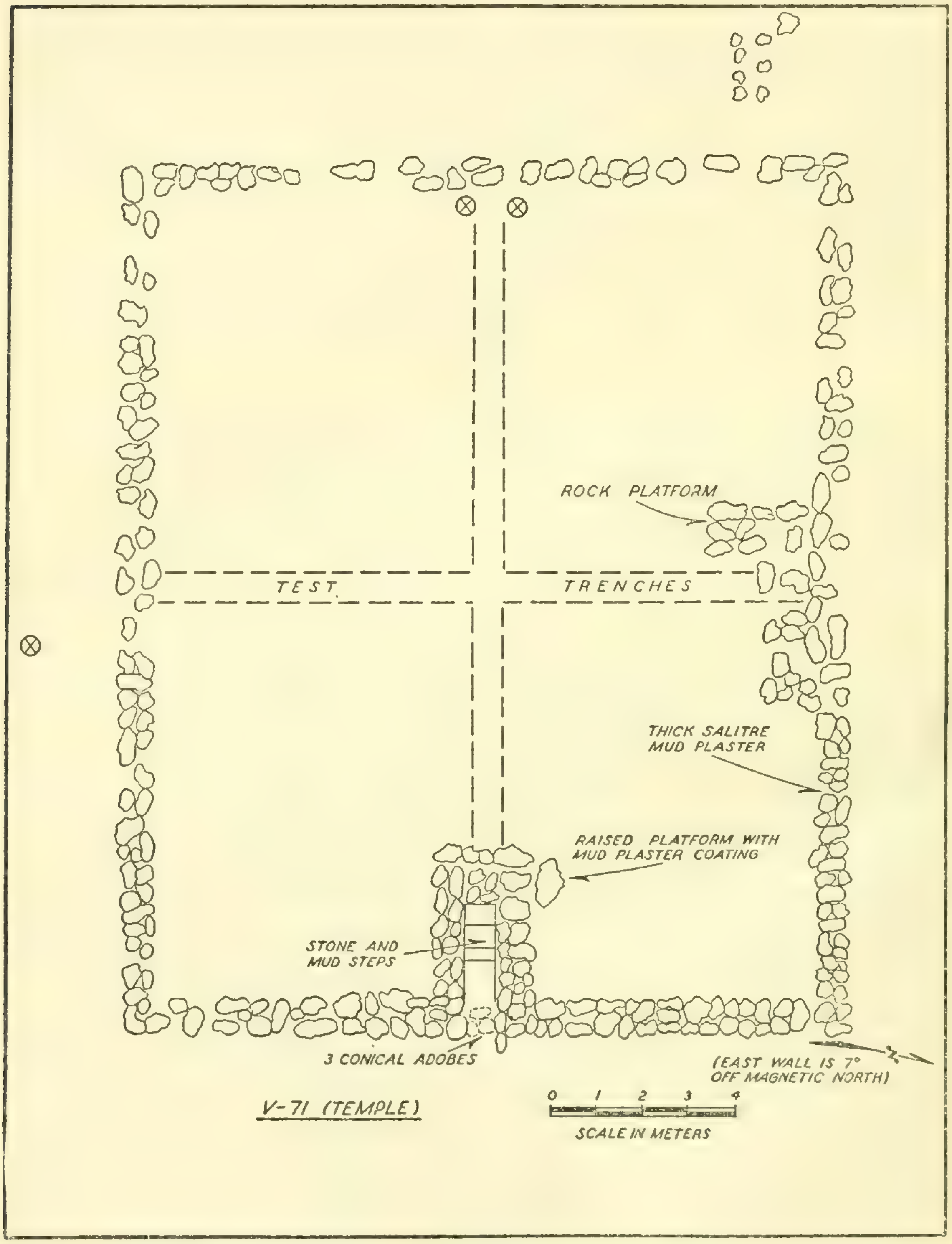
ROCK PLATFORM
TEST TRENCHES
THICK SALITRE MUD PLASTER
RAISED PLATFORM WITH MUD PLASTER COATING
STONE AND MUD STEPS
3 CONICAL ADOBES
(EAST WALL IS 7° OFF MAGNETIC NORTH)
V-71 (TEMPLE)
0 1 2 3 4
SCALE IN METERS

FIGURE 9.—Temple or community building foundation of stones and mud plaster at V–71 (Huaca Prieta de Guañape). Base of wall about 50 cm. below surface of refuse. Test trenches indicated by dotted lines are from 2 to 2.5 meters deep. Cross-in-circle symbol denotes llama remains. Middle Guañape Period. (Data from Strong and Evans, personal communication.)

the inside center of the west wall, were discovered within the building. However, at the foot of the entrance steps, blocking the passage, were three adobes, the only ones found in the site. These were all conical in shape, measuring 20 cms. across the base and 25 cm. in length.

Pottery of the Middle phase of the Guañape Period was found in the fill that covered the floor of the temple. Below the temple foundations and floor the rubbish was without ceramics.

The superstructure of the V–71 temple is completely conjectural. Perhaps more stones and mud mortar carried the wall higher, although the general absence of large rock on the site makes this a less likely possibility than that the walls were of adobe or perishable materials. The Strong-Evans excavations were limited to following the walls and cross-trenching the interior of the building. Interior roof-support posts, or post holes, were not found; but it is possible that such did exist in the unexcavated areas. A wooden roof structure is certainly presupposed, and the span of almost 15 by 20 meters would have necessitated post supports.

This temple building could have served as the religious or political nucleus of the Guañape Period village at V–71.

V–84 (*Compositan site*).—This site is one of the Compositan group of Late Guañape stations along with V–83 and V–85. The location is at the foot of the Cerros Compositan, Lower Virú-South (Quad D–5, northwest). The structure in question is near a small, natural, rock-covered knoll which stands a few meters north of the lower slopes of the Compositan spurs. This hill is about 25 by 20 meters at the base and approximately 10 meters high. The top of the hill appears to have been artificially flattened. At the foot of this little hill, on the north or down-valley side, there is an artificially constructed apron of earth and rocks. This apron platform seems to have been made in two levels. The larger and better-defined platform is adjacent to the foot of the little hill and rises about 75 cm. above the surrounding ground. The lower terrace or platform which is attached to the first is about 50 cm. high. Both platforms were built up and contained within rock-wall foundations constructed in the double-faced technique. The platforms are about 21 meters wide. The upper one extends out from the hill for an average distance of about 9 meters. The extent of the lower platform cannot be determined as it was either never finished or has been partially destroyed. On the upper platform, which has a rather uneven surface, there are stone foundations of at least two houses or rooms which may have been a part of a connected pattern of building. These rooms are small and have rounded corners.

V–84 is, indeed, an amorphous sort of structure or complex. It may be a dwelling site, but the unusual location, the prepared flattened hilltop, and the artificial platforms are unlike anything at the V–83 and V–85 sites except, possibly, the two platform complexes found on top of the ridge. It will be remembered that these were double platforms, one slightly higher than the other, which were made of earth and rocks and walled with a stone foundation. The V–84 platforms are not, though, set on the hilltop but at the foot of the hill. And the remains of smaller rooms on one of the platform levels differs from V–83. Tentatively, we are considering it a public rather than a regular dwelling structure. If this interpretation is correct, it obviously had some relation to the contemporaneous sites, V–83 and V–85, which are not more than half a kilometer from V–84.

V–127.—This is a hillslope and hillcrest site on the south side of the Valley in Lower Virú (Quad C–4, southeast). There are two parts to the site. The principal structure is a large rock-walled quadrangle on a sloping hill spur. Directly behind this part of the site, or toward the main mass of the bordering hills, there is a detached high knoll upon which there is a similar but smaller rock-walled quadrangle. The entire site, including the outlying limits of the midden, can be encompassed in an area about 150 by 80 meters. Occupation seems to have been confined largely to the crest of the sloping spur.

The larger quadrangle is oriented with the direction of the spur which is northeast-southwest (fig. 10). Only one long side of the quadrangle is still intact. The enclosing end walls are only faintly seen, and one long side can no longer be traced with accuracy. The northeast-southwest measurement of the quadrangle is slightly over 54 meters. The one intact side is marked by a double-faced rock-wall foundation which is now virtually flush with the ground surface. The estimated measurement on the southwest-northeast axis is about 24 meters. Twenty meters from the southwestern end of the enclosure a dividing wall or partition extends out at right angles. This wall can no longer be traced all the way across the enclosure, but, apparently, it once divided the larger rectangle into two parts. This dividing wall, unlike the outer walls, is made of conical adobes. Two layers or courses of adobes still remained in 1946. These adobes measure 30 cm. in length and 19 cm. across the base. They have been laid to make up a double-faced wall. The cones have been placed transversely in the wall, being laid end to end with the points in and the circular flat surfaces out (pl. 47, *center*, *right*). Interstices between the cones were filled with a clay rubble and with clay mortar. The wall measured 78 cm. in width.

It is possible that the entire enclosure was once walled with adobes which had been placed on a rock foundation in the outer wall. The scarcity of large stones along the stone-wall foundations suggests this. The total enclosure, however, seems too large to have been roofed in its entirety, although a part of it may have been covered. There is a fair amount of living refuse within the enclosure from which a Late Guañape pottery collection was obtained.

The second enclosure, which was rock-walled, is also only partially intact. I estimate its original measurements to have been in the neighborhood of 18 to 20 meters square. No interior partitions were observed.

There are two interpretations for this site. One is that it is a dwelling site of a compound nature. Rooms or separate houses, of

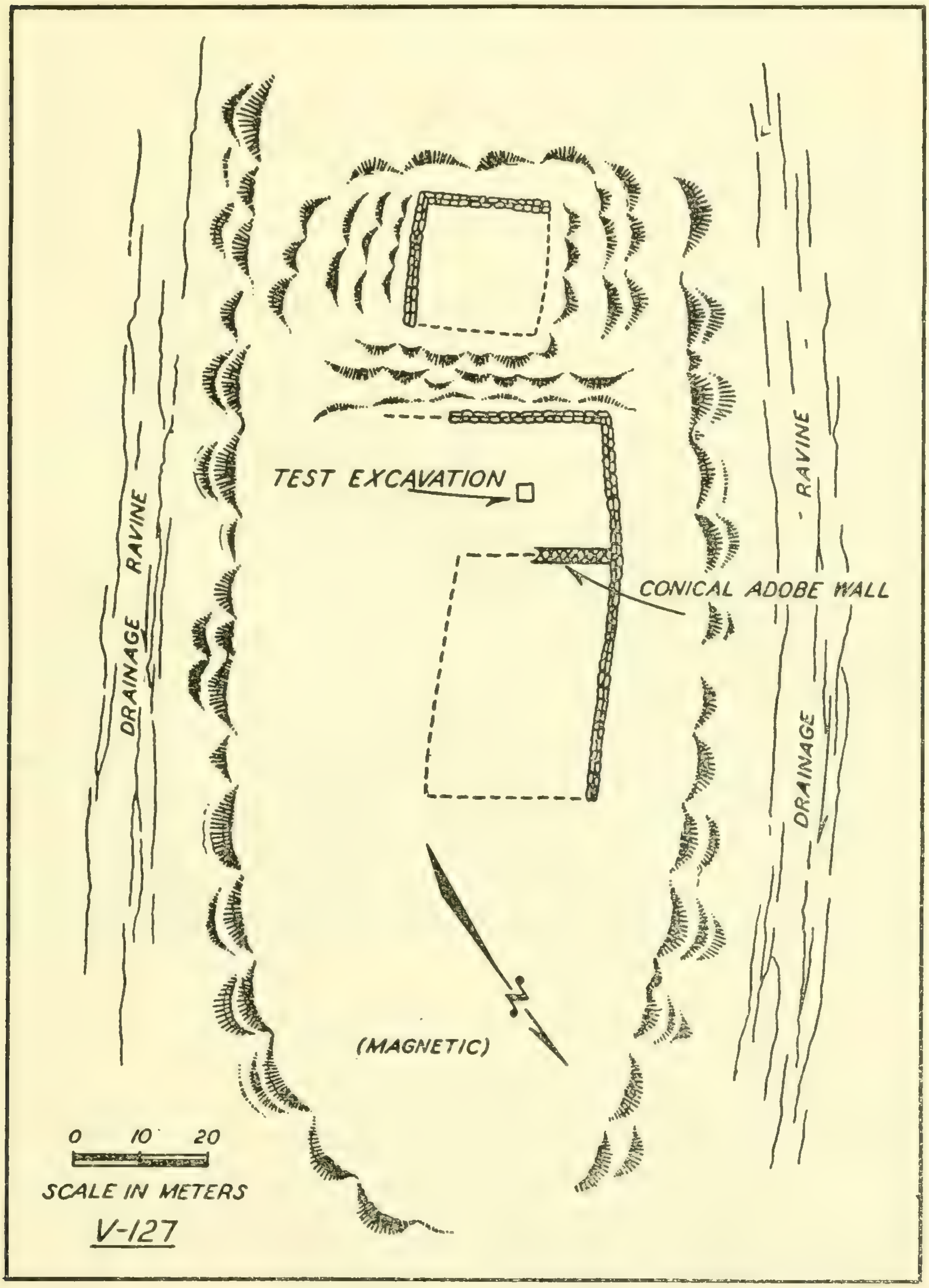
TEST EXCAVATION
CONICAL ADOBE WALL
RAVINE
DRAINAGE
DRAINAGE
RAVINE
(MAGNETIC)
0 10 20
SCALE IN METERS
V-127

FIGURE 10.—Site V–127 ground plan. Site on steep sloping hill spur. Late Guañape Period.

adobes, could have been built in either or both enclosures. The fragment of an adobe wall which we found in the larger quadrangle may have been such a remnant. If this interpretation is correct, the site is markedly different from V–83 and V–85. The V–83 and V–85 sites showed only scattered small houses of from one to three or, rarely, more rooms. The second explanation of the V–127 structures is that these large rectangles were public buildings of some sort. They may have been temple precincts.

CEMETERIES

V–2.—This is a cemetery of looted graves lying in the high sandy pampa about 1 kilometer north of the old hacienda of San Ildefonso (Quad D–2, southwest), Middle Virú-North. It is an area of about 100 by 50 meters on an old, stabilized drift bank of sand. Potsherds scattered about may, or may not, be from the grave excavations. It is possible that this area was also a small village.

The surface sherds date from the Middle phase of the Guañape Period. It seems likely, though, that some later material comes from the site. Larco Hoyle (1944 and personal communication, 1946) has excavated graves at this cemetery site, and some of the pottery specimens which he recovered show a blend of Cupisnique and Salinar influences. This would date them, in terms of the Virú sequence, as Late Guañape or, perhaps, even Early Puerto Moorin.

V–133 (*Cerro del Piño*, *South Cemetery*).—This cemetery and midden area of the Late Guañape phase is a mixed site. Adobe grave structures and funeral pottery revealed in old excavations also attest to the use of the spot as a Huancaco Period burial ground. It is located near the Cerro del Piño on the sandy slopes just above the *monte* growth. The Cerro del Piño is an isolated hill mass in Lower Virú-South (Quad C–5, northwest).

Late Guañape sherds are found in the dug-over area of the cemetery, some 100 by 50 meters in extent. This material probably came from both graves and living refuse.

TABULAR SUMMARY OF SITE TYPES OF THE GUAÑAPE PERIOD

Early phase

Living sites: Midden accumulations	1

Middle phase

Living sites: Midden accumulations	2
Community or ceremonial structures:	
Community Buildings: Rectanglar Enclosures	1
Cemeteries	1

Late phase

Living sites:	
Exposed Dwelling Sites: Scattered Small-House Villages	2
Midden accumulations[24]	4
Earth-Refuse Mounds	3
Community or ceremonial structures:	
Community Buildings: Rectangular Enclosures	2

Unplaced as to phase

Living sites:	
Midden accumulationss	3
Earth-Refuse Mounds	1
Cemeteries	1

THE PUERTO MOORIN PERIOD

PERIOD DEFINITION

The Puerto Moorin Period has its ceramic definition in the virtual replacement of the Guañape plain types by the distinctive type, Huacapongo Polished Pain (Ford, 1949, p. 63). It will be remembered that Huacapongo Polished Plain first made its appearance in the Late phase of the Guañape Period; but its great dominance comes slightly later. Puerto Moorin White-on-red is the only decorated pottery which consistently accompanies the Huacapongo Polished. It is a red ground, white-decorated type. Its full-time range, however, extends upward into the Gallinazo Period. We know, also, that the modeled, white-painted, and fine-incised burial ware of the Salinar Period of the Chicama Valley is representative of the funerary ceramics of the Puerto Moorin Period. Vases of this Salinar style have been found in the Puerto Moorin type site, V–66.

The division between Early Puerto Moorin ("time K–J" on the time scale) and Late Puerto Moorin ("time J–I" on the scale) is based entirely on percentage shifts in the type Huacapongo Polished Plain and the beginnings of its replacement by the type Castillo Plain. During the Early phase, Huacapongo Polished Plain is maintained at maximum strength; in the Late phase it diminishes in favor of Castillo Plain (Ford, 1949, fig. 4).

SITE DISTRIBUTION

The most striking difference between the site distribution patterns of the Guañape and Puerto Moorin Periods is the intensive occupation of the Huacapongo branch in the later period (fig. 11). Whereas only a single, miscellaneous midden site (V–180) in the Huacapongo dated from Guañape, over 40 Puerto Moorin stations, of various kinds, are reported from there. Some of these are on the Valley floor in

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[24] The term "midden accumulations," here, and in other period Tabular Summaries refers to sites discussed as "Additional Occupation Sites."

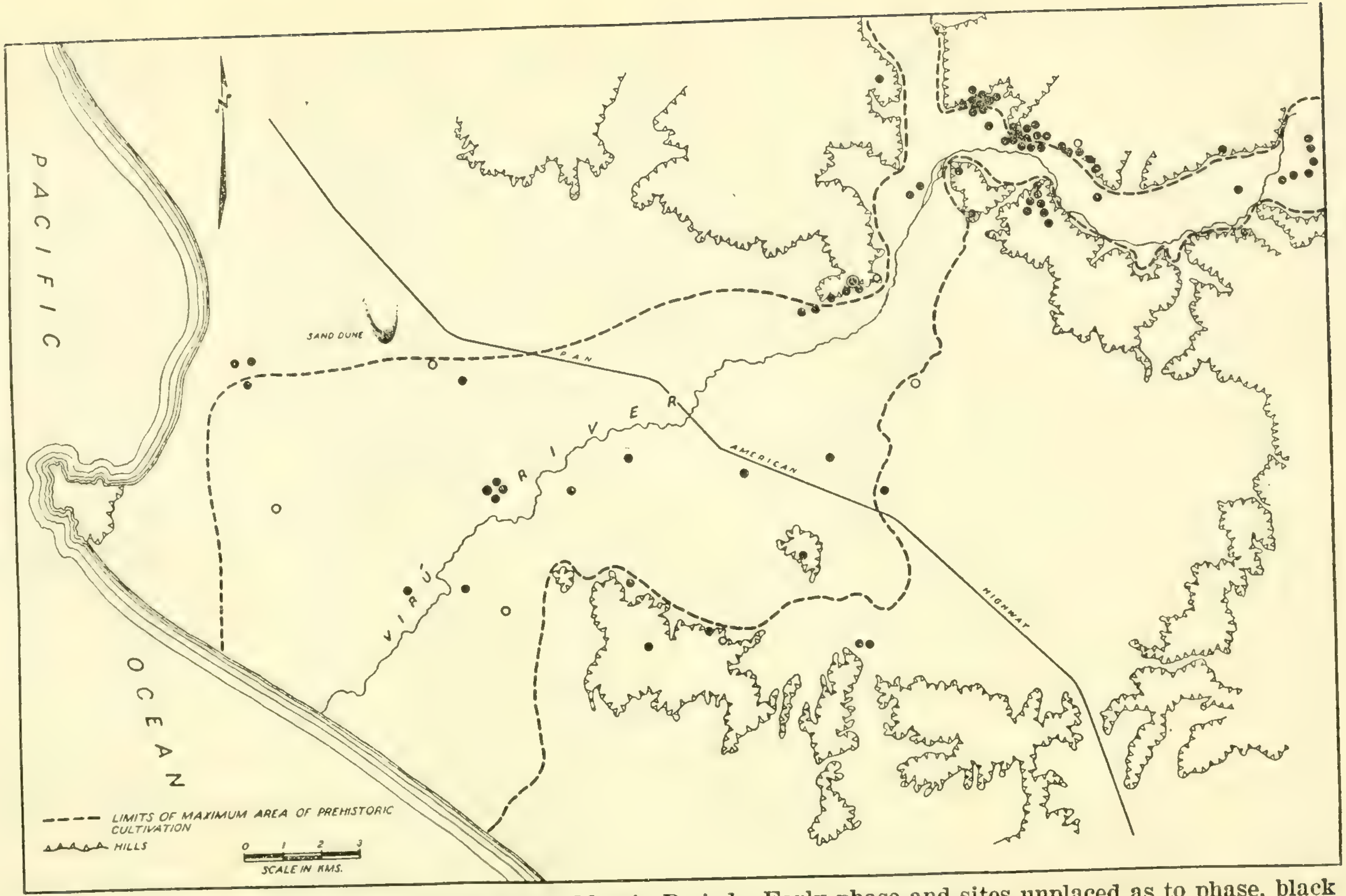
PACIFIC
OCEAN
SAND DUNE
VIRU RIVER
PAN AMERICAN HIGHWAY
N
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS.

Figure 11.—Site distribution map of the Puerto Moorin Period. Early phase and sites unplaced as to phase, black dots; Late phase, white dots.

the upper reaches of the branch, others are on the hill slopes and outwash plains of the north side, and still more are to be found on the hills bordering the southern side. In addition to the Huacapongo, there is a Puerto Moorin site in Upper Virú, two in the Valley at the mouth of Queneto quebrada, and several in Middle Virú, particularly on the north side of the Valley. In the Lower Valley the disposition of Puerto Moorin sites is, generally, similar to that noted for Guañape.

The intensive occupation of the Huacapongo during the Puerto Moorin Period, as well as the greater number of sites of this period in the Middle Valley, correlates with a remarkable increase in the total number of sites over the Guañape Period. There are 83 Puerto Moorin sites in our survey records of Virú as contrasted with the 18 Guañape sites which we were able to locate. Of these, 64 have been identified as Early, 11 as Late, and 9 are as yet unplaced as to phase.[25]

The great discrepancy in the number of Late versus Early sites has not been satisfactorily explained. It is certainly not correlated with site size as the later Puerto Moorin villages are no larger than the earliest ones. Aside from an over-all population decline, there are two reasonable explanations. One is that there has been a miscalculation on the amount of time involved in the gradual death of the pottery type, Huacapongo Polished Plain, and the inception and gradual growth of the later type, Castillo Plain. The transference here might have been more abrupt than Ford (1949, figs. 4, 5) has postulated. In brief, Late Puerto Moorin may be virtually nonexistent. Yet, as Ford's charts show, some of the deep stratitests revealed pottery percentages by refuse levels that would substantiate his assumptions. The second explanation assumes the validity of Late Puerto Moorin as a time period and further assumes a constant, or probably an increased, population for the Valley. With these two assumptions it is necessary to postulate a large number of sites for the Late Puerto Moorin phase which we did not discover. It is unlikely that such undiscovered sites are on the bare hillslopes and scoured outwash plains of the Huacapongo or Upper Virú, and it is most likely that they are in Lower Virú covered by sediments and later refuse in the Valley bottoms. The distribution of the few identified Late Puerto Moorin sites tends to support this. Of the 11, 6 are in Lower Virú and 3 in Middle Virú. This second interpretation of the paucity of known Late Puerto Moorin sites postulates a major population shift that may be related to Valley ecology. Namely, the upper quebradas of Huacapongo, that had been occupied with a great and sudden surge during the Early Puerto Moorin phase, were deserted in Late Puerto Moorin in favor of the Lower Valley bottoms.

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[25] This totals 84 rather than 83 as one site was occupied through both Early and Late phases.

This is, in part, an hypothesis. What is factual is that the Huacapongo margins were largely unoccupied during the three Guañape subperiods; at the beginning of the Puerto Moorin Period they were densely settled; and at the close of the Puerto Moorin Period they were virtually deserted. The physical nature of the Huacapongo is such that ceramic refuse is left deposited upon bare and rocky soil. Sites could not easily be hidden here, and our control is good. We do not have this control in the Lower Virú Valley. We know very little concerning the prehistoric occupation of the Central Valley floor during the Cerro Prieto, Guañape, and Puerto Moorin Periods. It may be that during the Early Puerto Moorin expansion into the Huacapongo branch the Lower Valley bottoms were equally densely settled; or it may be that during that time the Lower Valley flats were, for some reason, less desirable and the people sought the marginal sites of the upper reaches of the Valley.

SUMMARY OF SITE TYPES

Sites of the Puerto Moorin Period compose four functional categories: (1) living site, (2) community or ceremonial structures, (3) fortified strongholds or places of refuge, and (4) cemeteries.

As with the preceding period, the living sites may be divided into "Exposed Dwelling Sites," "Additional Occupation Sites," and "Earth-Refuse Mounds." The connotations for each are the same as in the Guañape Period. The exposed sites are those for which it is possible to obtain some structural and settlement plan. The others exist only as midden refuse.

Among the exposed dwelling sites there are three (V–86, 87, 204) which have the Scattered Small-House Village pattern first observed in Late Guañape. One of these three Puerto Moorin sites is Early, one Late, and one unplaced as to phase. Two of them (V–86, 87) are at the foot of the Compositan hills in Lower Virú-South. This is the same neighborhood where we found Scattered Small-House Villages of the Guañape Period (V–83, 85). The Puerto Moorin Period Small-House Village sites are almost identical in appearance to the earlier Guañape communities. The third Puerto Moorin site (V–204) is in Huacapongo, and it is mixed in its structural pattern. At one end of the site there are several small houses arranged at random. At the other end of the site the house foundations are conjoined or clustered. This conjoined or clustered pattern, which I have called the "Agglutinated Village," is a Puerto Moorin Period settlement form which also continues into later periods. The V–204 site may all have been built in the Puerto Moorin Period, or sections of it could have been constructed during the Tomaval Period, ceramics of which are also present on the surface of the site.

There are 13 Puerto Moorin sites (including V–204, again) which may belong to the Agglutinated Village type. All but one of these are of the Early phase, and most of them are in the Huacapongo. The Agglutinated Village pattern is one in which all, or a great majority, of the houses or rooms are conjoined one with another. The terms "multiroomed or "multicellular" might also apply, but these tend to carry the connotation of a single building. The Agglutinated Village units of Virú do not give the impression of single buildings. There is no outer enclosure wall that is recognizably distinct from other or "inner" walls. The Agglutinated unit, as I have defined it here, encompasses about the same amount of floor or housing space as the Scattered Small-House Villages which we have described. It is as though the individual houses were drawn together and attached to each other. This attachment is often at random. There seems to have been little care taken to see that walls were alined, and there is no symmetrical, patterned, or clearly purposeful arrangement to the agglutinations. This is the Irregular Agglutinated arrangement, a subtype of the Agglutinated Village to which all of the 13 Puerto Moorin examples seem to belong.

The Irregular Agglutinated Village is seen best in sites V–33, V–144, V–146, and V–203. All of these are hill-slope terrace sites on the northern shoulders of the Huacapongo branch. In general, the terraces of these sites are narrow and they do not extend along the face of the hill in long, even rows. Most rooms are less than 5 meters square, and a single row of rooms is usually confined to a terrace. The outline of the rooms may be square, oblong, rounded, or round. Walls, although conjoined along the same terrace and from one terrace level to another, are not carefully alined. Sites V–144, V–146, and V–203 average about 30 rooms or compartments each. Site V–33 is larger than any of these.

Among the others, somewhat qualifiedly classed as Irregular Agglutinated Villages, V–21 is a large hillside terrace site which suggests a sort of transitional stage between a Scattered Small-House pattern and the Agglutinate. A series of stone foundations showed houses of six rooms or so, with the small rooms very irregularly clustered, scattered over the slope. Probably owing to the terrain, the individual clusters were not so widely spaced as in sites like V–86 or V–87.

V–201 and V–202 are probably Irregular Agglutinated Villages, but they have been badly messed up, and the patterns are none too clear. Both of these are terraced sites as is V–193, where there is little evidence for wall structures.

V–66, in the Lower Valley, is an adobe site in the flats. A few conjoined room foundations were found. V–126, also in the Lower

Valley, revealed small adobe-walled rooms. The data are too scant on these sites to make any definite statement, but it is reasonable to believe that they represent Agglutinated Village units comparable to those traced out in the stone foundations of Huacapongo.

V–176 and V–177 are each, in part, Irregular Agglutinated Villages built on terraced hill slopes. But V–176 also includes a Compound Village unit, the sort named here as a Rectangular Enclosure.

The Compound Village, as contrasted with the Scattered Small-House or Agglutinated Village, is one placed within a planned enclosure wall. That is, the total community has been conceived of as having a certain over-all form, and the outer or enclosure wall defines this form. The most common subtype is the Rectangular Enclosure. Within the rectangle of the outer wall there may be rooms or courtyards of various sizes, shapes, and arrangements. The V–176 Rectangular Enclosure Compound has an interior nonsymmetrical arrangement of small rooms. There are 15 of these rooms, some square, some oblong, and some rounded or circular. To accommodate itself to the slope, the Compound has been built upon two terrace levels, and there is a longitudinal median division wall running along the face between the upper and lower terraces. Nevertheless, the outer enclosure walls ascend, without a break or marked step, from the lower to the upper terrace. The V–176 compound is the only Compound Village type which we recorded for the Puerto Moorin Period; but its ceramic component is purely Puerto Moorin, and there is no good reason for doubting the period assignment. Presumably, the Rectangular Enclosure Compound is uncommon for this early time but did exist.

V–177, which is located on the slope just above V–176, is most likely an Agglutinated Village of irregular arrangement. Most of the rock house foundations are found on a single, long terrace. There are also in the site pattern two large rectangular platforms. One of these is walled. This may have been another Compound, although it has no interior subdividing walls. Possibly, it was a Community Building of the type reported for the Guañape Period, or, possibly, it is a foundation of a later period building.

There are some very extensive Puerto Moorin midden sites on which there are no evidences of foundations. V–101 and V–105, near the sea in Lower Virú-North, give indications of occupation areas 300 or 400 meters in length although of no great depth. Similarly, on the opposite side of the Valley, V–64 covers several acres. Other Puerto Moorin occupation areas are more difficult to appraise on the matter of size as they are mixed with and confused with refuse zones of later periods.

The six Puerto Moorin Earth-Refuse Mounds of which we have knowledge are in the Middle and Lower Virú Valley. Two of them are probably old stabilized dunes on which Puerto Moorin refuse was deposited over areas less than 100 meters in diameter. The other four seem to have been pure earth and refuse piles that were built up over several periods. All of them are small in extent.

There are 12 definite and two possible pyramidal mounds which were probably built wholly, or in part, during the Puerto Moorin Period. (The complications and doubts concerning the period of construction of these mounds is discussed in detail further along.) "Pyramid Mounds" in Virú are solid, sloping-sided, flat-topped masses of earth, gravel, adobe, and rock. All but one are rectangular, the exception being circular. Most are oblong in ground plan, although a few are square or nearly so. The slope of the sides is usually rather steep, and the summit platforms are well-defined. Sometimes the mound base has been encased in a carefully laid retaining wall of stone, and often the rectangular summit-platform is outlined with a stone wall or stone-wall foundation. Summit platforms are most often on one level, although two and three levels are known. The sides of many of these mounds may have been terraced, although the evidence for this is gone except in two or three cases. Ramps leading up to the mounds are rare but do occur. Construction varies. We know that some mounds were amassed of earth and small rock and, subsequently, plated with large rock. Others have interior cores of adobe, usually truncated-conical adobes, covered with rock. And some seem to have been constructed solely of adobe or earth.

They are described in detail farther along, but measurements range from 15 by 15 to 60 by 60 meters at the base and from 1.50 to 8.50 meters in height. There are stone-wall foundations of rooms on the summits of some but not all.

Nine of these mounds are on the outwash plains or valley floor of Huacapongo, three are in the Middle Valley, and two are in the Lower Valley. The Huacapongo and Middle Valley Pyramid Mounds are placed as either Early or indefinite; one of the Lower Valley mounds is dated as Early while the other is Late. The Late phase mound (V–290) differs in form from the others in having long apronlike and complicated lower platform attachments. These are traits more common to the later Gallinazo and Huancaco Period "Pyramid-Dwelling-Construction Complexes."

The fortified sites of the Puerto Moorin Period share, or incorporate, a number of features of the living sites and the Pyramid Mounds. It is assumed from their topographical situations that these fortified sites were, indeed, that. This was a primary function. But it is also evident that they had other functions. There are two types of fortified sites in this period, the large "Hilltop Redoubts" and the smaller "Hilltop Platforms."

There are two of the Hilltop Redoubts. Bitín Fortress (V–80) is on the summit of Cerro Bitín and dates from the Early phase. Cerro del Piño (V–132) occupies the summit of that hill and dates from Puerto Moorin and Early Gallinazo. Both sites are on isolated hills rising from the Valley floor in Lower Virú-South. The Hilltop Redoubts are characterized by a great outer encircling wall. This enclosure is not of a perfect or symmetrical shape as the wall tends to follow the natural contours of the hilltop but, in general, the outline is that of a great oval. V–80 has an enclosure 400 meters long and about 100 meters wide.

Within the enclosure area there are several centers of construction, and these centers are grouped around natural eminences of the more or less flat hill summit. These constructions include the rock-walled foundations of conjoined rooms. Some of these in V–80 are Irregular Agglutinated patterns while others are of the more symmetrical Regular Agglutinated sort. This last type of dwelling arrangement, represented by structures in the eastern and western ends of the V–80 enclosure, is not characteristic of the Puerto Moorin community as we have defined it. The rooms in these clusters are small but perfectly rectangular and carefully alined. They are not quite comparable to the Compound sites, although they resemble the Puerto Moorin Rectangular Compound site, V–176. Also in V–80, but not in V–132, are two large, conjoined rooms. One of these is rectangular (15 meters square) and the other ovoid (18 by 13 meters). It is possible that these rooms, or enclosures, are comparable to the empty rooms or enclosures of the Guañape Period which we have referred to as Community Buildings.

Besides dwelling clusters or large rooms, there are, in both V–80 and V–132, small rectangular, flat-topped Pyramid Mounds. These are usually near the dwelling clusters and may cap the highest points within the Redoubts. They are, in most every way, similar to the Pyramid Mounds of earth and rock described for this period from the Valley. The only significant difference is in size, the mounds within the Redoubts tending to be smaller.

It, thus, appears as if the Hilltop Redoubt sites were places of refuge containing within their outer walls the dwellings and the probable temple platforms found in less well-defended locations near the Valley floors.

The Hilltop Platforms are found on the high, narrow crests and peaks of the hills bordering the Virú and Huacapongo. They consist of what appear to be series of house platforms arranged in terrace-step fashion along the ridge. The platforms are usually faced with rock retaining walls. On some of them there are definite evidences of houses; on others there are not. In many, the highest platform is a little larger, higher banked, or more carefully dressed than the others, suggesting a Pyramid Mound. Some of the Hilltop Platform sites, such as V–137, have as many as 25 or 30 platforms while others have only three or four. In general, these sites could have been dwellings or places of refuge, although they could have by no means held the large numbers of people that the Hilltop Redoubts sheltered. It is possible, too, that they served as lookouts and shrines.

Puerto Moorin Period cemeteries, of which we have recorded three of the Early and one of the Late phase, are known only as small (probably less than 100 meters in diameter) plots situated on the margins of the Valley. In two cases they are actually within midden areas of the period. Graves seem to have been simple pit inhumations.

EXPOSED DWELLING SITES

Explanatory note.—There are 15 dwelling sites or house groups which show foundation or other structural evidence and which can be reasonably dated as belonging to the Puerto Moorin Period. At six of these sites only Puerto Moorin ceramic components were recovered; hence, these date as "pure" dwelling locations and structures of the period. At nine other house-site groups the ceramic collections showed other period components in addition to those of the Puerto Moorin Period. In all of these sites there is some question as to which ceramic component dates the constructional remains which we are describing. After weighing the evidence carefully, I have decided that the structures and house patterns at these locations are largely of the Puerto Moorin Period. This question is discussed in specific cases in the site descriptions which follow.

Definite identifications:		Probable identifications:		
V–66 [26]	V–176	V–21	V–146	V–203
V–86	V–177	V–33	V–201	V–126
V–87	V–193	V–144	V–202	V–204

V–66 (*Puerto Moorin site*).—This site is a large midden and cemetery area which was occupied or used as a burial ground in several periods. It is located on the open sandy pampa of Lower Virú-North and lies some two kilometers back from the beach at the edge of the present-day *monte* growth (Quad B–3, northwest). The midden has an extent of several hundred meters in both diameters but does not appear to be of great depth in any one place. Pulverized sea shells make up a large part of the refuse. Midden potsherds were of the Early Puerto Moorin phase.

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[26] Sites V–66 and V–146 are recorded in Ford's (1949, p. 81) site lists as dating from time K–L (Late Guañape); but his more significant chart (fig. 4) places both as time J–K (Early Puerto Moorin). We have followed the chart.

On the southwestern edge of the midden area there were surface indications, in 1946, of a very badly eroded adobe building or buildings. Strong and Evans conducted some minor excavations here, clearing away a part of such a structure. This was a building apparently containing several compartments or rooms, each averaging about 3 by 4 meters in size. The adobe walls revealed in the excavations were 80 cm. wide and built of a double row of adobes (pl. 12, *top*). The adobes were of an odontiform or loaf-shaped type, being flat on the bottom with slanting sides ending in a concave top, the whole giving the appearance of a loaf of bread. Individual adobes measure 35–32 by 25 by 15 cm. in length, breadth, and thickness. Finger-impressions and general contour indicate that they were handmade on a flat surface. The thin prepared clay floor associated with the rooms and walls was met with at 60 cms. beneath the surface of the sands. Walls definitely did not extend below this floor level. Undoubtedly, the walls had been made entirely of adobes, but only the lower course or two of these now remain. Early Puerto Moorin sherds were found in the sand fill above the floors.

V–86 (*Compositan site*).—This is a Scattered Small-House Village situated at the foot of the Cerros Compositan a few hundred meters south of V–83 and V–85 (Quad D–5, northwest) (fig. 12). It dates as of the Late phase of Puerto Moorin. About 13 house foundations of stone can be made out on the flood plain of a small quebrada (pl. 12, *center*). The village was probably larger, but many houses have been lost through flood erosion. House foundations are scattered at random over an area 125 meters in diameter (pl. 12, *bottom*). All of the houses are of either one or two rooms. These rooms are either rectangular or somewhat rounded. Small doorways are noted in the sides of some rooms and in the corners of others. Average room size is from 2 to 3 meters square. There is one larger building in the group which is 7 by 8 meters, but the wall of one side continues for several meters beyond the doorway, so the building may be incomplete due to erosion.

From appearances there is every reason to believe that V–86 was once much the same sort of community as V–83 and V–85. House arrangement, house type, and house size are much the same. Building superstructures were probably made of adobes.

V–87 (*Compositan site*).—The location for this site is much the same as that for V–86. It lies against the foot of the Cerros Compositan on the flood plain of a small quebrada (Quad D–5, northwest).

The dating is Early Puerto Moorin. The community is made up of the scattered stone foundation remains of 14 or 15 houses (fig. 13). Those which are best preserved show double-faced masonry walls, small rectangular and rounded-rectangular rooms, and units of one to three rooms. The site area is embraced in a radius of 100 meters. The appearance is much like V-86 and the two Guañape Period sites in the same region, V-83 and V-85.

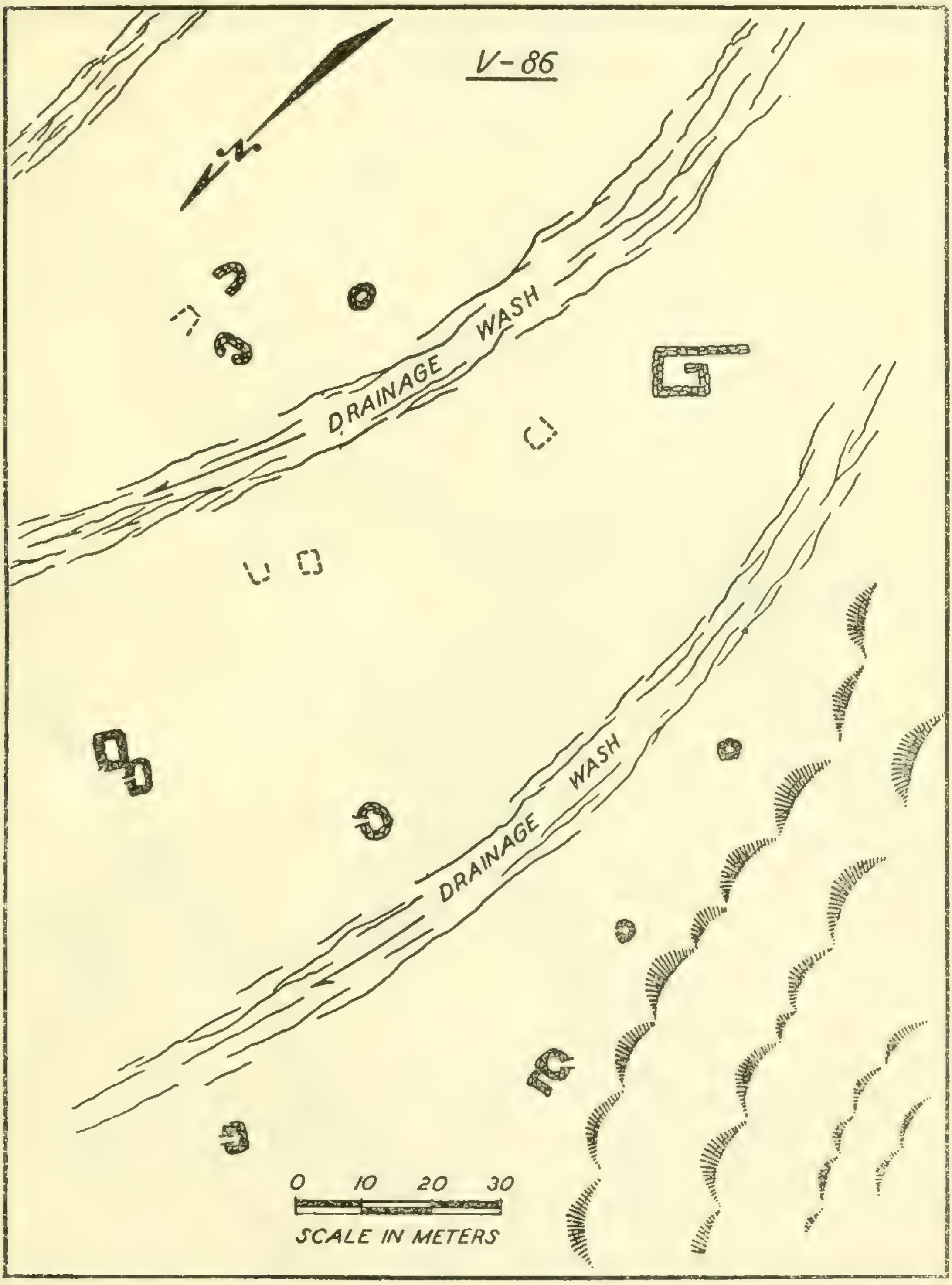

FIGURE 12.—Site V-86 ground plan. Located on old outwash plain cut by flooding. Late Puerto Moorin Period.

V–176.—This site is located on the sloping outwash plain at the foot of the hills which border Huacapongo-North (Quad F–1, southwest). Like the section at the foot of the Compositan hills it is almost

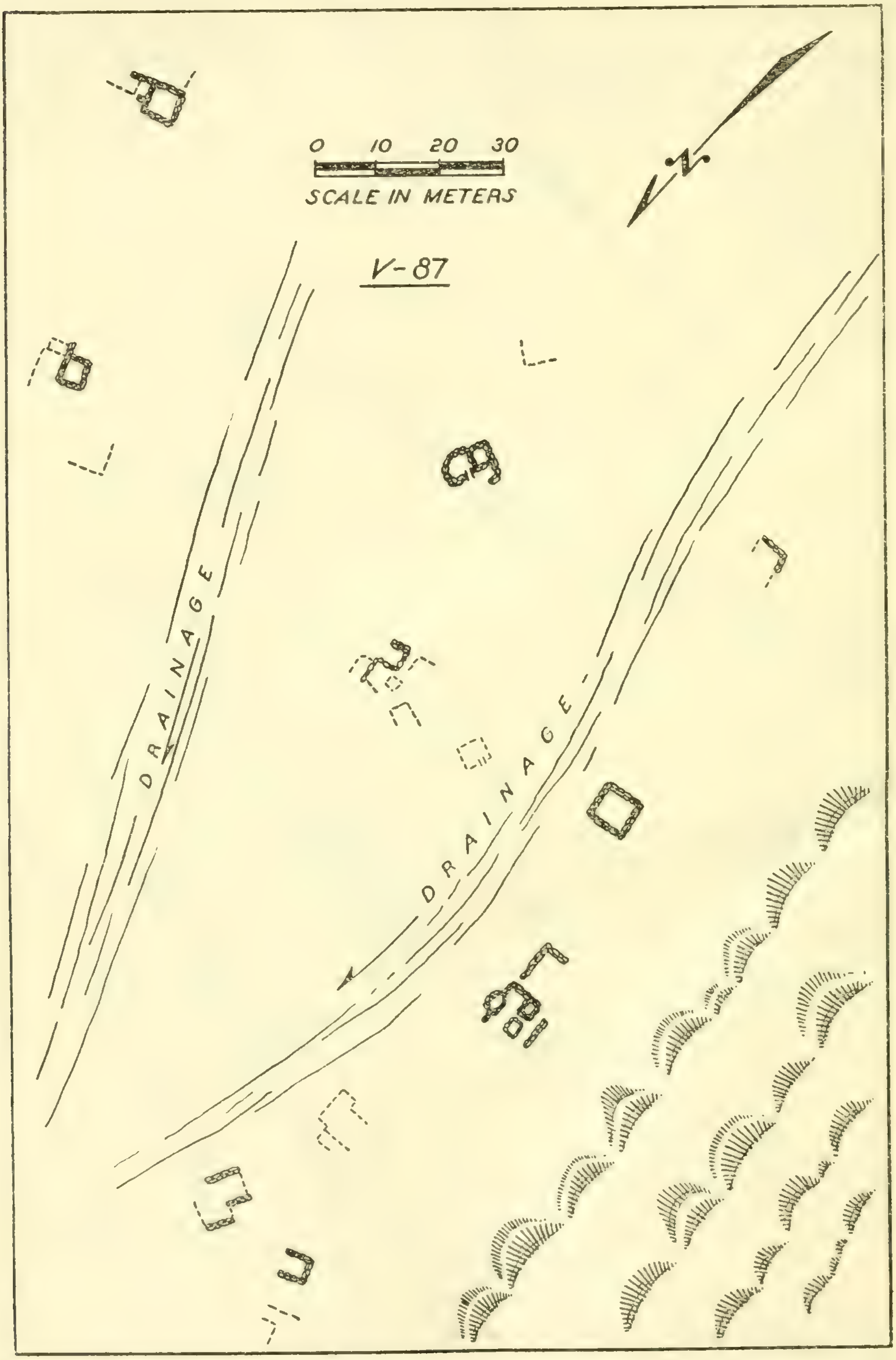
0 10 20 30
SCALE IN METERS
N
V-87
DRAINAGE
DRAINAGE

FIGURE 13.—Site V–87 ground plan. Located on old outwash plain. Early Puerto Moorin Period.

barren of vegetation. Millions of boulders of all sizes, carried down by the occasional rains, cover the ground in every direction. The site consists of the stone foundation walls of a series of conjoined terrace houses in an area 70 by 40 meters in extent. At the uppermost part of the site the buildings are better preserved. Here there is a quadrangle or rectangular compound which measures 29 by 18 meters (fig. 14). The floor surface within is built upon two levels, and the quad-

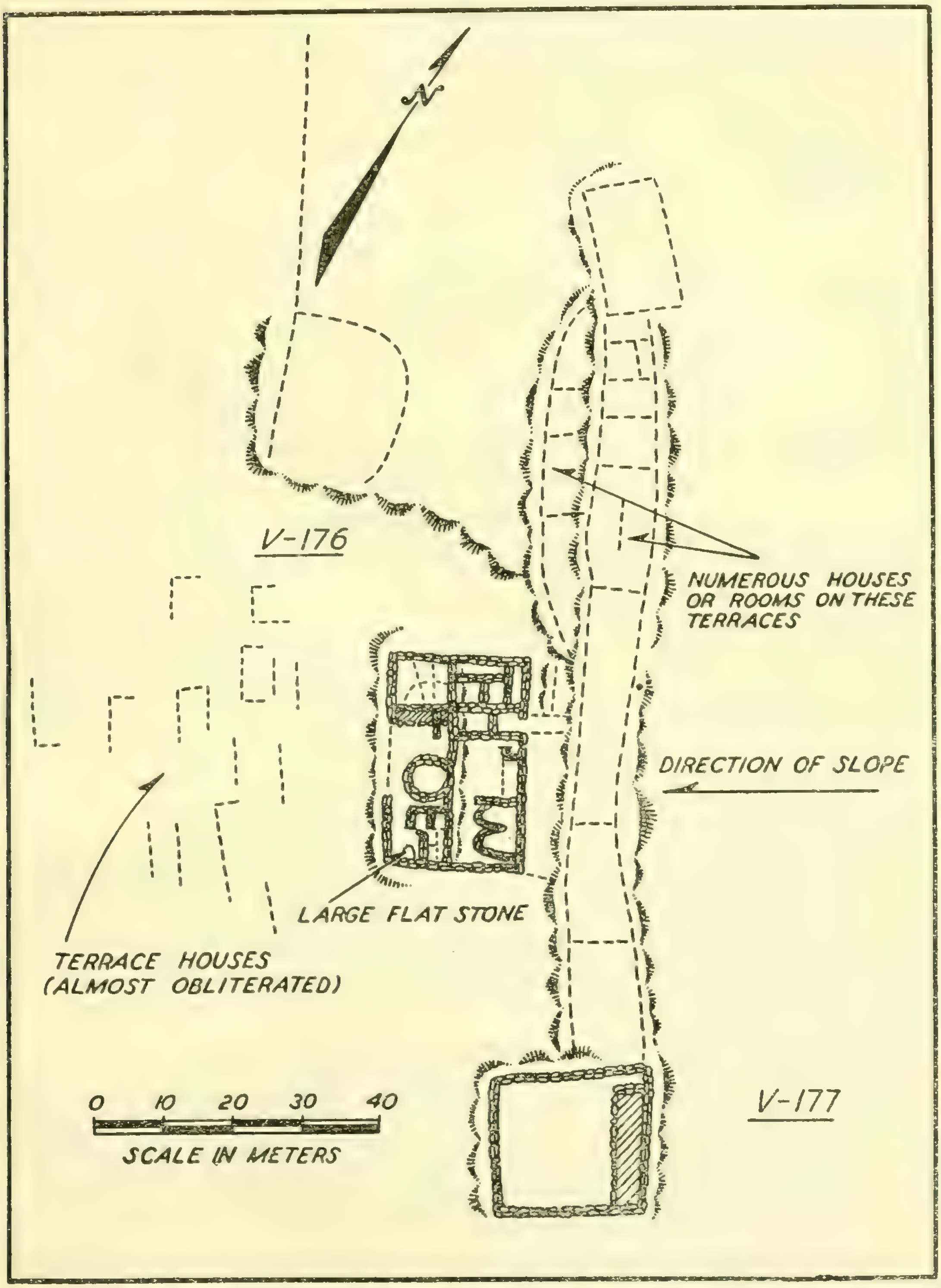
N
V-176
NUMEROUS HOUSES OR ROOMS ON THESE TERRACES
DIRECTION OF SLOPE
LARGE FLAT STONE
TERRACE HOUSES (ALMOST OBLITERATED)
0 10 20 30 40
SCALE IN METERS
V-177

FIGURE 14.—Sites V–176 and V–177 ground plans. Terraced sites on slope. V–176 dates as Early Puerto Moorin; V–177 as Late Puerto Moorin.

rangle is subdivided into 15 rooms. Most of these rooms are rectangular, although three rooms are rounded in form. Rooms range in size from 2 by 3 meters to 7 by 8 meters. One room has a raised banquette along one side of the wall. Walls are constructed in a double-faced, cyclopean technique and are 50 to 60 cms. in width. Refuse is scattered both inside and outside of the house, and potsherds are quite numerous.

The dating of this site is based upon a large collection of sherds, all of which fall into the Early Puerto Moorin bracket. The scattered house terraces on the lower part of the site are consistent with our picture of Puerto Moorin habitation sites, but the large multiroomed structure is unusual. Buildings of this general type (Rectangular Enclosure) become common later, and we may have here a forerunner of the class.

V–177.—This site is situated directly up slope from V–176, and could be considered a part of it (Quad F–1, southwest). The area from which the survey collection was made is a long terrace, 7 to 12 meters in width and almost 150 meters in length. At each end of this terrace platform are rock-walled squares, also constructed on platforms but at a somewhat higher level than the long terrace (fig. 14). The larger rock-walled square measures 18 by 22 meters, and a raised banquette 4 meters wide extends along the side of one wall. On the long terrace there are faint alinements of stones which were probably wall foundations of smaller contiguous rooms, but these are too imperfectly preserved for systematic plotting.

It is assumed that the long terrace was, in this case, occupied by conjoined smaller houses with rock-walled or rock-foundationed rooms. The big rectangles at each end may have been community religious or political structures. If so, these buildings must have served the entire area of V–176 and V–177.

V–177 dates from the Late phase of Puerto Moorin.

V–193.—This is a steep hillside community in Upper Virú (Quad E–1, northwest). It is in a small quebrada which opens off the main drainage on the west side. It consists of 7 or 8 small house platforms irregularly spaced on the hillside. Refuse and sherds were moderately abundant.

The site dates from the Early Puerto Moorin phase.

V–21.—The houses and the rooms that compose this site are small (Quad E–1, southeast). Five or six rooms to a house is the maximum. There seems to be no regular arrangement of houses with relation to each other, and room arrangement within a house is haphazard and is dictated by the necessity of building on hill-slope terraces of about 2 meters width. Only stone foundations are still standing. These are double-faced and cyclopean and average about 50 cm. in width. Possibly, walls here were built to full height in stone, as sufficient scattered building material can be found around the house foundations. The entire outwash plain of the quebrada slope is a great mass and jumble of boulders of various sizes.

On initial inspection it was postulated that some of the many small terraces at V–21 might have been agricultural plots rather than house platforms. Similar terraced plots are known in the Peruvian highlands, but here in the Huacapongo quebrada this seems precluded by lack of water supply. V–21 and all of the other sites discussed in this section lie well up the slope above the highest of the ancient canal systems that pass along this part of the Valley. Except for the very rare torrential rains, no water flows down the slopes of the foothills bordering Huacapongo. This fact, and the abundance of potsherd debris in and around the terrace platforms, makes it almost certain that they were used as dwelling places.

There is in V–21 a house unit of two large rectangular rooms, each several times the size of most of the house rooms of the group. It was questionable as to whether these rooms belonged to the Early Puerto Moorin Period or if they were a part of a Tomaval Period occupation, which is also represented in the pottery collection. Segregated surface collections did not help us much, as pottery types of both periods were found in all parts of the site. Nor would excavation have resolved the problem, as all of the house foundations were built directly upon the natural gravel and rock of the outwash plain and there was no evidence of superposition. However, by comparing the large rooms in V–21 with similar structures in this same section of the Valley, I am inclined to believe that they are later Tomaval Period structures and not special Puerto Moorin Period features.

V–33.—This site, like V–21, dates from the Early Puerto Moorin Period (Quad E–1, southeast). Dating is complicated by the presence of a Huancaco ceramic component at the site. Most of the house foundations indicate small rectangular rooms, however, and probably belong to the Puerto Moorin rather than to the later period. The rooms were connected and arranged terrace fashion on narrow, steep terrace steps. Individual rooms range from 3 by 3 meters to 2 by 1.50 meters. There is somewhat more regularity to the arrangement of rooms here than at V–21, but this is probably enforced by the narrow terraces upon which only a single file of rooms could be constructed. Pottery refuse was very abundant in and around the rooms.

V–144.—This site is located just below a big La Plata Period site (V–145) and seems to have been partially cut through and destroyed

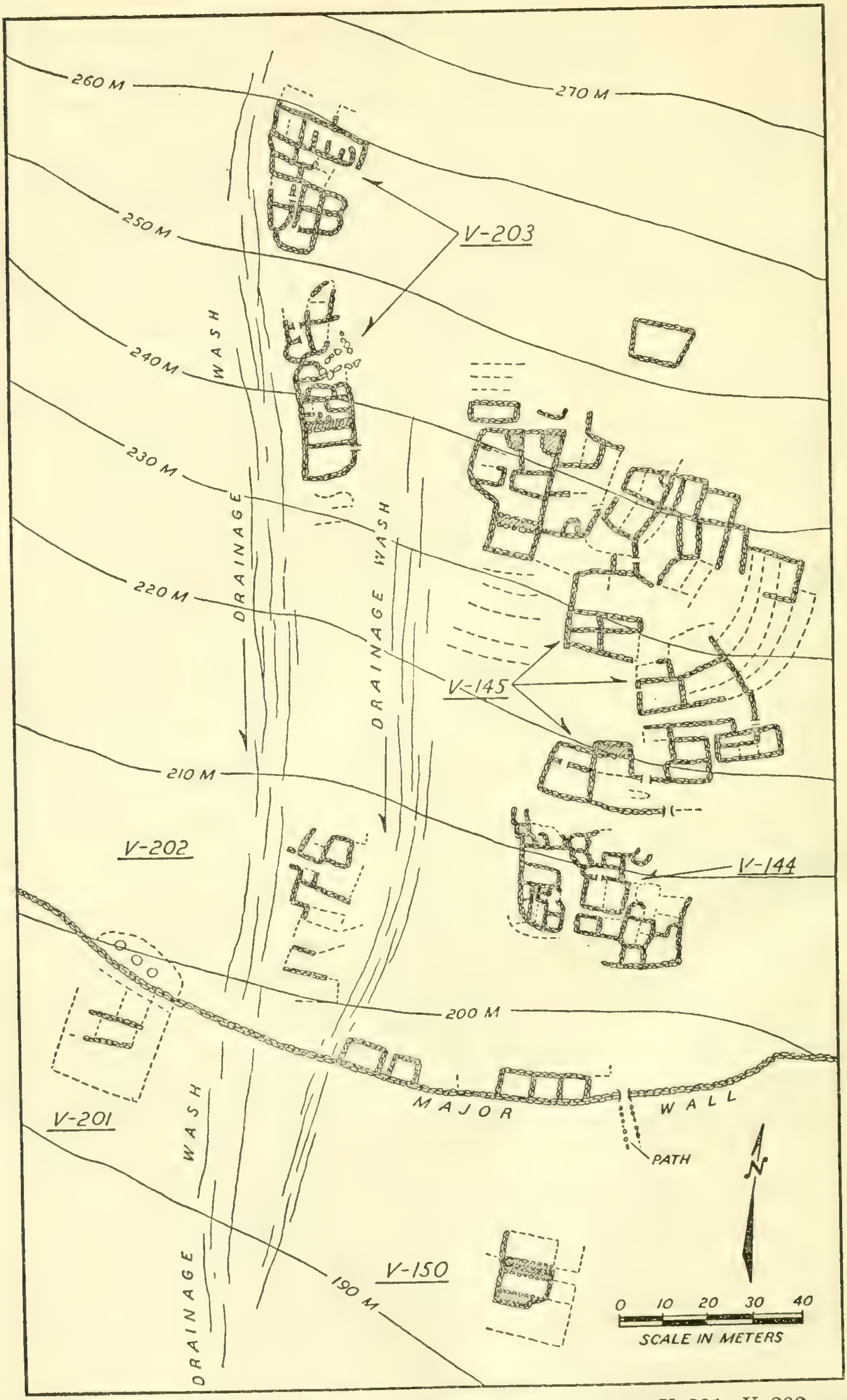
260 M
270 M
250 M
240 M
230 M
220 M
210 M
200 M
190 M
V-203
V-145
V-144
V-202
V-201
V-150
DRAINAGE WASH
DRAINAGE WASH
DRAINAGE WASH
MAJOR WALL
PATH
N
0 10 20 30 40
SCALE IN METERS

FIGURE 15.—Ground plans for sites V-144, V-145, V-150, V-201, V-202, and V-203. The major wall probably dates as Huancaco or Tomaval. Sites V-144, V-201, V-202, and V-203 are Early Puerto Moorin Period; V-150 is Huancaco Period; and V-145 is Lo Plata Period.

by the later buildings (fig. 15). It is an Agglutinated Village unit built upon a relatively broad, flat, natural terrace of the outwash plain (Quad E–1, southeast) (pl. 13, *center*). Approximately 35 rooms can be counted now, but it appears as though the total site was once a little larger. There does not seem to have been a carefully laid-out plan in the construction of this site. Some rooms are more or less squared; others are rounded or have rounded corners. The rather irregular nature of the ground plan, with the absence of any long, straight walls extending from one room to the next makes it seem likely that the group grew by accretion rather than having been constructed at a single time. The disparity in the sizes of the various rooms does suggest, however, that one has here complex living structures which were constructed for diverse functions of sleeping, storage, etc. The site dates as Early Puerto Moorin, and the late component is both Tomaval and La Plata.

V–146.—This site is located in the small quebrada northeast of the plantation house at Hacienda Tomaval (Quad E–1, southeast) (pl. 13, *top*). It is on the boulder-strewn slope or floor of the flood plain which lies between the immediate high hills and the cultivated valley bottom. There is no depth of rubbish owing to the scourings of the occasional floods.

The site is made up of a number of conjoined stone house foundations. Twenty-five or more room foundations were counted, and there, undoubtedly, were more which have been destroyed by downwash from the hills. These rooms are small, rectangular or slightly rounded in outline, and connected with each other in a haphazard way as though room units were added from time to time as desired and with no particular plan or building scheme in mind. Because of the hill slope, rooms were arranged in terrace fashion, and the necessity for terracing may account for the compact, interconnected plan of V–146.

The pottery collection from this site is overwhelmingly of the Early Puerto Moorin phase. A very few late sherds, of various periods, were also found; but as the immediate area of the quebrada is dotted with later sites this is not unusual. A subsidiary clue to the dating was the marked weathering of the stones that made up the narrow double-faced walls of the house foundations. The darker shade of weathering stood in sharp contrast to stones in nearby houses built during the much later Tomaval Period.

V–201.—This site covers an area no more than 25 meters in diameter (Quad E–1, southeast) (fig. 15). The foundation structures are so badly preserved that it is almost impossible to plot house or room arrangements. There has been some grave digging, and the graves appear to have been of the Huancaco Period. The buildings, however, date from Early Puerto Moorin.

V–202.—This site, which is situated very near to V–201 (Quad E–1, southeast), is very similar in that it is a small rock-walled house group which is almost completely destroyed (fig. 15). It also shows a mixture of Huancaco and Early Puerto Moorin ceramic components of which the latter dates the buildings.

V–203.—The site, located on the same slope just above V–201 and V–202, embraces two irregularly clustered building groups (Quad E–1, southeast) (fig. 15; pl. 13, *bottom*). Each group measures about 40 meters up and down slope and from 10 to 20 meters across the other diameter. Most of the room foundations in each group are rectangular although a few are rounded. Approximately 13 and 18 rooms are in each group, respectively. Rooms average 3 by 5 meters, but in one of the groups there are two quite large rooms (10 by 5 meters). One of these large rooms has a raised banquette along one wall. As the slope is quite steep at this point nearly all of the rooms are terraced, one above the other. Dating is Early Puerto Moorin. The La Plata ceramic component at the site comes from later burials in the area.

V–126.—This site is located at the foot of the hills which border the Valley in Lower Virú-South (Quad C–4, southeast). The site, on some very low, rounded hills, covers an area of about 100 meters in diameter. Midden and sherds cover this zone, and on the crest of one of the hills are some badly eroded structures made of conical adobes. Some clearing excavation was done here in an attempt to follow out a small room. A clay floor was found associated with the base of the adobe foundation. The site dates as Early Puerto Moorin, but the area had been re-used as a Huancaco Period cemetery.

V–204.—The site is located on the rocky outwash plain of one of the largest quebradas in Huacapongo-North (Quad E–1, southeast) (fig. 38). It is both a scattered and agglutinated site. The smaller rooms or houses (about 3 by 2 meters), both rectangular and ovoid, are found mainly toward the northern part of the site. This difference in size and somewhat segregated arrangement suggests that these smaller structures are probably of the Puerto Moorin Period. Note the similarity between these northernmost building foundations and those of such typical Guañape and Puerto Moorin Scattered Small-House Village sites as V–83, V–85, V–86, and V–87. The agglutinated room arrangements at the southern part of the site may date as Tomaval.

Additional occupation sites.—There are 41 additional sites which show evidence of occupation during the Puerto Moorin Period but upon which no structures can be reasonably identified with this period. These are:

V–11
V–13
V–18
V–22
V–23
V–24
V–26
V–28
V–29
V–30
V–31
V–32[27]
V–51
V–59
V–64
V–70
V–78
V–101
V–102
V–104
V–105
V–110
V–112
V–129
V–143
V–145
V–150
V–170
V–171
V–183
V–184
V–186
V–209
V–210
V–211
V–213
V–214
V–223
V–228
V–229
V–300

Sites V–101 and V–105 are the only pure, or nearly pure, Puerto Moorin sites of this type. Both belong to the Early phase. V–101 (Quad B–3, northwest) has also been described as a cemetery of this period. The midden area, about 200 meters long and 75 meters wide, is composed of pulverized shell and dark sand. Refuse appears superficial. Site V–105 (Quad B–3, northwest) lies in the open sandy pampa not far from V–101. It is a thin but extensive shell midden some 300 or 400 meters in extent. It should be noted that practically this entire section of the Valley margin, for 2 or 3 kilometers north and east of V–105, is midden covered. A superficial inspection of various parts of it indicates that the occupation is largely of the Puerto Moorin Period. The area was undoubtedly a center of population during the period, particularly the Early phase of the period.

Site V–64 (Quad E–3, southwest) is a midden site of several acres located in Middle Virú-South just out of the present line of cultivation. In addition to a large Puerto Moorin (Late) ceramic component there are evidences of Huancaco Period graves and still later Tomaval refuse.

The following sites are combined midden and cemetery sites in which later graves have been made into old Puerto Moorin village areas: V–11 (Quad D–2, southeast), V–12 (Quad D–2, southeast), V–70 (Quad E–2, northeast), V–104 (Quad D–2, southeast), V–129 (Quad C–4, southwest), and V–186 (Quad F–2, southeast). All show an Early Puerto Moorin phase component.

Sites V–22 (Quad E–1, southeast), V–23 (Quad E–1, southeast), V–24 (Quad E–1, southeast), V–28 (Quad E–1, southeast), V–29 (Quad E–1, southeast), V–30 (Quad E–1, southeast), V–31 (Quad E–1, southeast), V–32 (Quad E–1, southeast), V–110 (Quad D–5, northeast), V–112 (Quad D–5, northeast), V–143 (Quad E–1, southeast), V–150 (Quad E–1, southeast), V–183 (Quad E–1, southeast), V–184 (Quad F–1, southwest), V–209 (Quad E–2, northeast), V–210

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[27] Ford's (1949, pp. 80–81) site lists record sites V–32 as time K–L (Late Guañape) and V–64 as time H–I (Early Gallinazo). His chronological charts (figs. 4 and 5) place V–32 as time J–K (Early Puerto Moorin) and V–64 as time I–J (Late Puerto Moorin). We have followed the chart dating here, as elsewhere in the present report.

(Quad E–2, northeast), V–211 (Quad E–2, northeast), V–213 (Quad E–2, northeast), V–214 (Quad E–2, northeast), V–223 (Quad F–2, northeast), V–228 (Quad F–2, northwest), and V–229 (Quad F–2, northwest), have rock-walled foundations of houses which are attributed to other periods. Presumably, these are locations in which later peoples built upon an earlier Puerto Moorin midden site. All of these midden sites also belong to the Early phase of the period.

Sites V–18 (Quad E–2, southwest), V–78 (Quad E–4, northwest), and V–102 (Quad E–2, southwest) have rock-walled house foundations and graves of one or more periods separate from Puerto Moorin. These were all Puerto Moorin sites of the Early phase which were later re-used for building or burial.

The two big sites of the Gallinazo Period, V–51 (Quad E–2, southwest) and V–59 (Quad B–4, northwest) show lower refuse levels which date from the Puerto Moorin Period unplaced as to phase. Little can be told of the nature of the Puerto Moorin communities or structures at these two sites.

The remaining occupation sites of the period are V–171 (Quad C–4, northeast) and V–170 (Quad C–3, southeast). Both of these are mixed midden sites. Site V–170 belongs to the Early phase of the period. Stratification at V–171 shows an old Puerto Moorin village (unplaced as to phase) at this spot.

PYRAMID MOUNDS

Explanatory note.—There are 12 Puerto Moorin sites which I have classed in the category of "Pyramid Mounds." These are more or less rectangular flat-topped artificial mounds which presumably functioned as bases for buildings. Whether the buildings that once surmounted them were of a public or community nature, such as temples, or whether they were simply dwelling houses can only be speculated upon. As the mounds differ significantly from other dwelling sites of the period, it is most reasonable to believe that they were the bases for special buildings.

All of those considered here are made of earth, stone, and, in some cases, adobes. Mound fill is usually composed of earth and small rocks or packed adobes while the mound surfaces are rock-covered. In most cases this is not fitted rock masonry, although there are examples of mound retaining walls of fitted stone. Although evidences of mound summit structures are vague, foundations can be observed on some of the mounds. There are also indications of subsurface chambers having been built into mound summit platforms.

It should be noted that the use of stone in the construction of these putative Puerto Moorin Period Pyramid Mounds probably has no cultural significance. All of the 12 mounds to be discussed are in the middle or upper parts of the Valley where natural stone is abundant and where it is used in all types of architecture.[28] It is at least possible that similar pyramid-type mounds were built in the lower part of the Valley in Puerto Moorin times. Two such possibilities will be discussed in the ensuing subsection, Questionable Pyramid Mounds. Because of the much greater erosion of earth or adobe mounds it is impossible, on the basis of surface examination, to determine whether these lower valley mounds are of true pyramid type or whether they are Dwelling-Construction Mounds or Earth-Refuse Heaps.

Of the 12 Puerto Moorin Pyramid Mounds which we are considering here, there is none which shows ceramics purely of the Puerto Moorin Period. This throws doubt on whether or not substructure mounds or pyramids were built in Virú during the Puerto Moorin Period. It is a possibility to be considered that in the construction of mounds during the later periods, Puerto Moorin living refuse was accidentally included in the building materials and rubble. In a small densely occupied valley like Virú such a possibility is increased. Yet the fortuity of such repeated occurrences would be great. The mathematical probabilities favor some Puerto Moorin construction. An argument for the building of mounds during Puerto Moorin times is the occurrence of conical type adobes within the mound core of some of these sites. The conical adobe type has consistently early associations on the north coast of Perú, and in Virú it has been found only in Guañape and Puerto Moorin Period sites.

It is, then, likely that many or all of these mounds were made during Puerto Moorin times, and that their later ceramic components are only the result of re-use, for burials or other purposes, in subsequent periods. Or, maybe, inner levels of mound construction were built in the Puerto Moorin Period and additional mound levels, mantles, or construction features were laid over or attached in later times. The determination of the building history of any of the mounds herein discussed would require careful excavation.

The 12 Puerto Moorin Period pyramidal mounds are the following:

V–77
V–103
V–141
V–185
V–187
V–188
V–198
V–199
V–200
V–206
V–230
V–300

V–77 (*Huaca San Juan, No. 1*).—Site V–77 may have been built in the Puerto Moorin Period (phase undetermined) (Quad E–2, northeast). There is no ceramic evidence to support this assumption, but the use of conical adobes in one of the smaller mound platforms suggests a Puerto Moorin date. (See section on The Gallinazo Period, pp. 136–139, for a full discussion of this site.)

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[28] Kroeber (1930, p. 57) also has called attention to the north coast use of stone on adobe being a direct function of environment.

V–103 (*Huaca San Juan, No. 2*).—Site V–103, along with V–77, is one of two large rock-covered mounds in the cultivated fields opposite the San Juan or Queneto quebrada (Quad E–2, northwest). V–103 is the smaller and more northeasterly of the two (see fig. 16). The total mound area of V–103, exclusive of a ramp approach, is 74 by 53 meters. This is a rectangle defined by a rock retaining wall of well-fitted, roughly coursed masonry. The summit platform of the mound is 8 meters above the surrounding fields and is small compared to the total area of the mound, measuring only 36 by 16 meters. The flanks of the mound slope from its outer perimeter up to the edge of the platform with no marked breaks. The one exception to this smoothness of slope is an alinement of large rocks, possibly the remains of a wall, paralleling the mound structure and located about midway between the summit and the perimeter on the northwest side. Stones of all sizes are scattered over the flanks of the mound, but the summit platform is relatively free of rock and appears to be composed only of earth. Three deep trench excavations had been put into the mound at some time in the past. These reveal the body of the mound to be made up of closely packed truncated-conical adobes (pl. 14, *bottom*). For the most part, the adobes were placed in vertical tiers of three files; in some places, though, they are set crisscross, and some of the largest are placed upright with base down. Large, angular stones appear scattered here and there through the adobe mass. The truncated-conical or bullet-shaped adobes average 30 cms. in length and 17 cms. across the base. A few of the large ones are 47 by 27 cm.

Mound orientation is 25 degrees east of north on the long axis. At the south, or southerly, corner, a stone and earth ramp, retained by stone walls on each side, slopes down from the outer wall of the mound in an east-southeast direction. The ramp narrows to a point and terminates 53 meters from the mound edge. There are some possible evidences of rock-walled rooms or enclosures, no longer well-defined, along the southeast foot of the mound.

The ceramics from V–103 are divided into an Early Puerto Moorin and an Estero component. The Estero material must represent a rather casual re-use of the structure for the adobe types imply an early date for the building of the mound.

V–141.—This site lies in Huacapongo-North just within the edge of cultivation on the Valley floor (Quad F–2, northwest). It is constructed of earth and/or adobes and rocks. The form of the mound is rectangular, and the summit platform is flat and in two levels (see fig. 53, p. 250). Average height is between 2 and 3 meters. Orientation of the long axis is almost due east-west. The total summit platform measures 21 by 14 meters. Foundations of a rock wall, of the

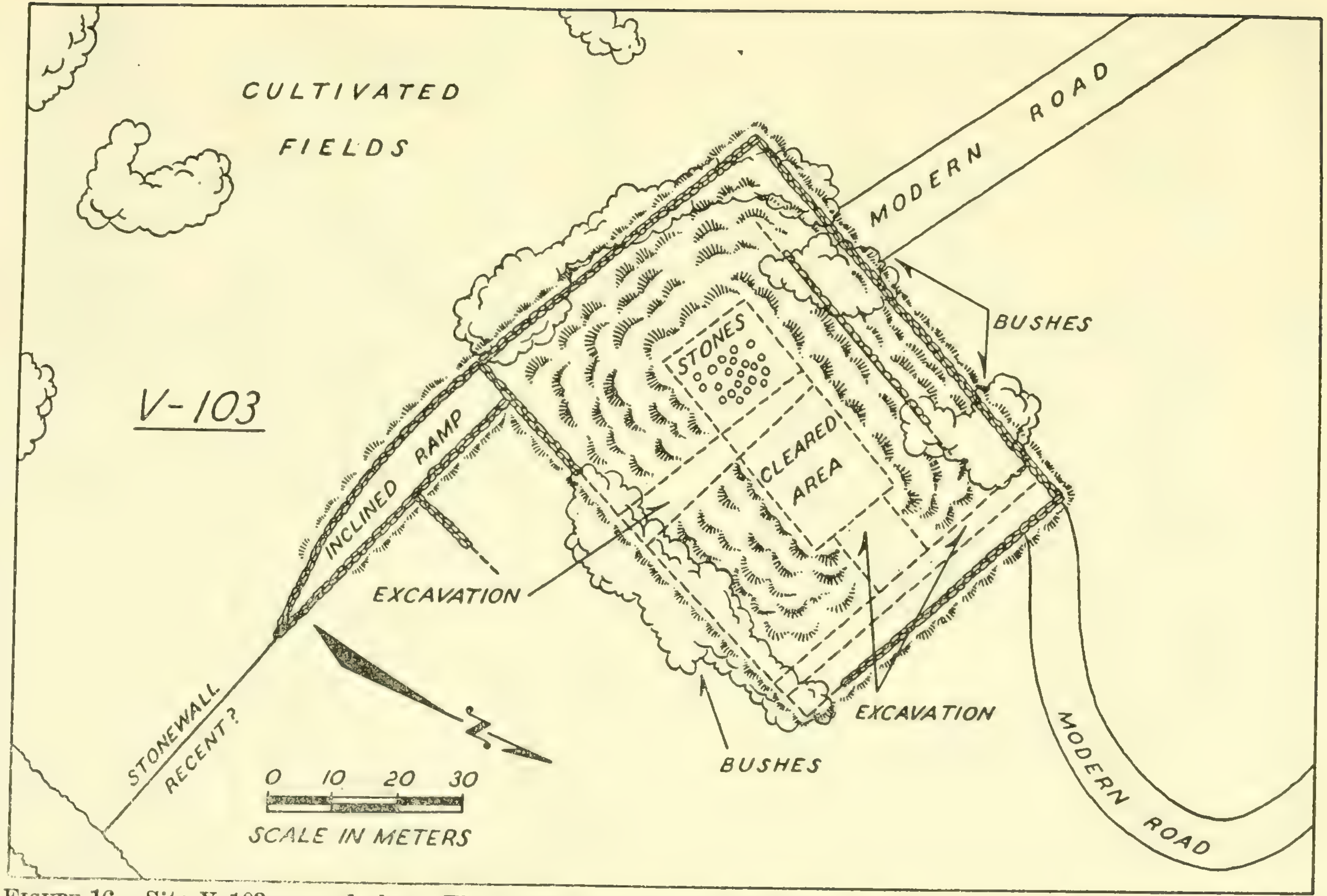
CULTIVATED
FIELDS
V-103
MODERN ROAD
BUSHES
STONES
CLEARED AREA
INCLINED RAMP
EXCAVATION
EXCAVATION
BUSHES
MODERN ROAD
STONEWALL
RECENT?
0 10 20 30
SCALE IN METERS

FIGURE 16.—Site V–103 ground plan. Flat-topped rectangular pyramidal mound of conical adobes covered with stones. Outer retaining walls of stone. Height of summit approximately 8 meters. Early Puerto Moorin Period.

double-faced type masonry, enclose a part of the summit platform. The western end of the platform, which is not enclosed by this wall foundation, is at a slightly lower level than the eastern end. There are some evidences within the summit enclosure of partitioning walls, although these are nearly obliterated. At the eastern end of the mound, but outside of the enclosure, there is a prow-shaped extension on which is a little rounded mound of small rocks.

An excavation had been made at some time in the past on the summit within the enclosure. Our cleaning of this old excavation revealed dirt and rock fill and a small hand-made adobe of amorphous shape. Possibly burials had been encountered in this excavation, although I noted no convincing signs to suggest it.

Ford's dating collection breaks down into a component of sherds, gathered from the mound summit, consisting of Huancaco Period types and a second component, collected from around the base of the mound, of Early Puerto Moorin types.

V–185 (*Huacapongo Mound*).—This mound is located a few hundred meters west of the present-day village of Huacapongo, on the north side of the river in the Valley bottom (Quad F–2, northeast). This is a flat-topped, rectangular pyramid slightly over 6 meters in height (fig. 17). The mound sides were constructed in narrow, vertical terrace steps faced with gray, water-worn boulders which have been crudely coursed and spalled into an ashlarlike masonry. These step terraces on the pyramid are 75 cm. wide and are still visible on two sides of the pyramid. Three such terraces lead up to the summit on all sides of the mound. On the northwest and southwest sides broader and less steep stone-faced terraces extend out from the mound proper at a lower level. The total ground area of the entire mound construction, including the broad, low terracings is estimated at about 37 by 40 meters. The mound summit measures about 22 by 13 meters. The orientation of the shorter axis of the mound proper is northwest-southeast. On the northwest and southeast sides there are remains of narrow stairway approaches leading up the steeply terraced sides of the summit. These stairways are placed exactly opposite each other at the center point of the long axis. They are 2 meters wide. The summit platform is of earth and shows no signs of having been dug over.

We made a small test excavation in one of the narrow terraces of the mound proper at the south corner. Thirty-two sherds were taken from a hole 50 cm. in depth. All belonged to the Early Puerto Moorin Period. Another and larger collection, taken from all parts of the mound and its immediate environs, showed a division between Early Puerto Moorin and Tomaval Period types.

Extending out from the southwest side of the mound are two massive rock-wall foundations made of large water-worn boulders. These run

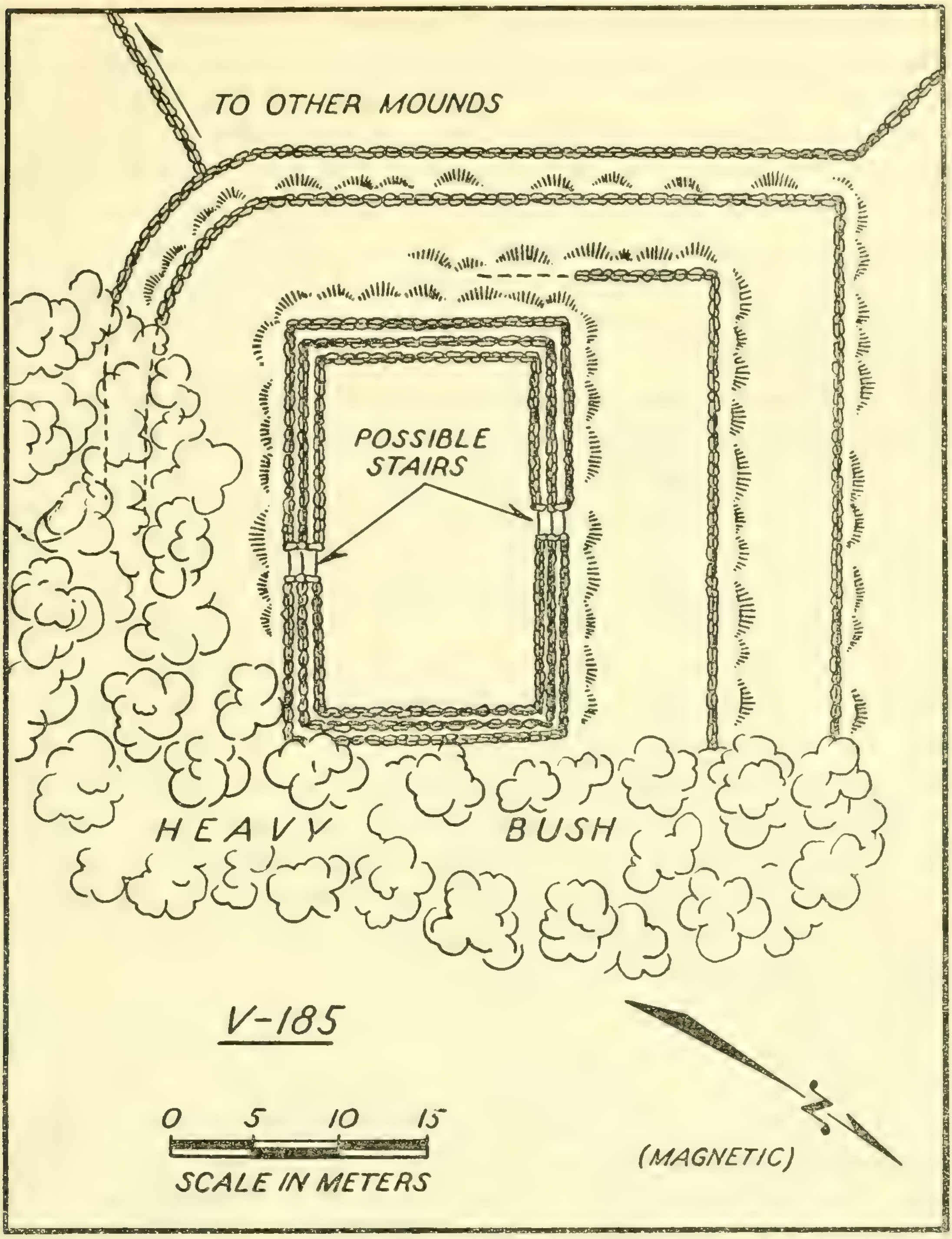
TO OTHER MOUNDS
POSSIBLE STAIRS
HEAVY BUSH
V-185
0 5 10 15
SCALE IN METERS
(MAGNETIC)

FIGURE 17.—Site V–185 ground plan. A stone-faced earth pyramid. Height of top platform approximately 6 meters. Dating questionable as both Early Puerto Moorin and Tomaval ceramic components are represented.

outward in a radial fashion, one going almost due west and the other south-southwest. The latter, although not followed out or mapped, appears to connect with another similar, though smaller, mound some 200 to 300 meters distant.

V–187.—This mound is in Huacapongo-South, in the upper reaches of the Valley (Quad G–1, southwest) (fig. 54) (pl. 14, *center*). The terrain is the rocky soil of the Upper Huacapongo valley bottom. Modern cornfields surround the site. The mound is circular or ovate in outline, and it measures about 35 meters in diameter at the base. The mass is considerable as the flanks are steep, and the total height is 8.50 meters. The big summit platform has been dug over and cut to pieces by *huaqueros*. Judging from surface appearances and from these old excavations, the building materials were, primarily, earth and rock. However, tombs or rooms, with tapia clay walls are revealed in some of the old summit cuts. The tapia adobe walls are 40 cms. thick. In one place later rock walls have been superimposed over tapia walls. There is no doubt that the mound is an artificial construction made as a platform.

Grave ceramics were abundant at the site, and these belong to the Huancaco Period. From the mound at large a number of Early Puerto Moorin pottery fragments were collected.

V–188.—This is the remnant of a rectangular, flat-topped rock-and-earth mound, located 50 meters southeast of V–187 (Quad G–2, northwest) (fig. 54, p. 252). About one-third or one-half of the bulk of the construction has been carried away by flooding on the south side of the mound. Original mound size was probably 15 by 15 meters and 2 to 3 meters high. Mound orientation is nearer the diagonal than the cardinal directions. On the southwest side there are the remains of what looks like a long, sloping ramp approach to the summit, although this feature, too, has been mostly torn away by old floodings. The cross section exposed by the floods reveals the entire mound structure to be composed of earth and rock fill. On the summit, which has been badly dug over, there are a few remains of rock walls suggesting house foundations.

Looted graves are apparently responsible for the Huancaco Period collection from this site, but a large collection of Early Puerto Moorin pottery gives a more likely date for the construction.

V–198.—This site is in the Huacapongo Valley bottom in Huacapongo-South (Quad G–2, northwest). It is on arid, rocky terrain. There are two mounds about 15 meters apart. The smaller is 34 by 23 meters at the base and is 3 meters high; the larger is 37 by 27 meters at the base and 3.40 meters high. Probably both were once rectangular in form, but now they appear ovate. Both have flat platform tops, and each seems to have been constructed of earth, gravel, and boulders. They are oriented with their long axes in a general east-west direction. *Huaquero* activity has been intensive in both mounds so that the summits are now a jumble of boulders. Grave sherds and human bone are scattered everywhere.

The two mounds are connected at their eastern ends by a rock wall which bridges the 15-meter gap separating them. The foundations of a massive rock wall begin at the northeast corner of the mound on the north and extend in a northeasterly direction for 600 to 700 meters to a juncture with another great wall which runs, more or less, at right angles to it (pl. 48, *top*). This second wall extends from the hills bordering the Huacapongo on the south clear across the Valley Floor and almost touches the opposite hills on the north side of the Valley.

Pottery from V–198 is mixed between Early Puerto Moorin and Tomaval. Sherds of the later styles are in this case clearly from the summit graves.

V–199.—This mound site is located well up the Huacapongo drainage on the south side of the main branch of the river (Quad G–2, northwest). The terrain is the Valley floor, but at this point it is not now in cultivation. According to the local inhabitants, however, this extreme upper floor of the Valley has been under cultivation within their memory. Its aspect today is a gravel-strewn flood plain dotted with algarroba and cactus. Sites, especially mounds, are numerous in the area; and three unnumbered small- to medium-sized mounds lie off to the northwest of V–199.

V–199 is rectangular, measuring 33 by 35 meters from toe to toe. Its slightly longer axis is oriented southwest-northeast. The average height of the summit is 1.50 meters, and extending off the southwest side there is a lower platform or apron about 75 cm. high and 10 meters wide. The mound was apparently made of rock and earth, but no rock retaining walls or facings remain. On the summit are the remains of several rock-walled rooms.

An interesting system of small canals is associated with the mound. Two little canals, probably distributaries from a major system, approach the mound from the northeast. One swings to the right and follows around the northwest side, then cuts across the mound apron on the southwest side, and finally continues off across the plain. The other canal divides itself at the foot of the mound on the northeast side with the respective arms continuing around the northwest and southeast sides; the two arms then join together and both join the first canal where it curves around the west corner of the mound. The canal beds are only about 50 cm. wide and are carefully lined with rock. There is some question as to whether or not these canals are prehistoric. They may be the result of relatively recent farming and irrigation in this part of the Valley.

The ceramic collection is divided between Huancaco and Early Puerto Moorin. I am inclined to interpret the mound date as being Puerto Moorin. The semidestroyed houses on the summit may be the remains of a later Huancaco occupation.

V–200.—This mound, in the rocky valley bottom of Upper Huacapongo, is, today, situated on the fringe of cultivated land (Quad G–2, northwest). It measures 20 by 12 meters and is about 1.50 meters high. There is a suggestion of a lower, walled terrace on the west side which is about 2 meters wide. On the summit of the mound proper is the stone foundation of a rectangular building. There are vague evidences of one or two small side rooms attached to the larger rectangle.

No collection was made here, but only Puerto Moorin, Huancaco, and Tomaval sherds were noted on the surface.

V–206 (*Corral Gate Mound*).—This site is in the Corral district of Huacapongo-North (Quad E–1, southeast). The mound is on higher ground overlooking the Valley bottom (pl. 47, *center*, *left*) but lies just inside the modern irrigated ground. The structure is rock-covered, flat-topped, and has steeply sloping sides. From its general appearance, as well as from what we can see of its interior structure, it seems to be wholly artificial. The highest part of the mound is about 5 meters above the surrounding terrain. It is virtually rectangular in shape, and is oriented approximately north-south. Base measurements are about 40 by 45 meters; summit measurements, which were more accurately obtained, are 28 by 27 meters. There are three levels on the summit platform. The lowest, 3 meters high, extends completely across the west side of the summit and is between 9 and 10 meters wide; a level 4.25 meters high is on the northeast corner and is about 14 by 7 meters; the highest level, at the southeast, has an elevation of 5 meters and a platform surface of 22 by 17 meters.

The mound was made of rock, gravel fill, and truncated conical adobes, and was, apparently, faced with large water-worn boulders. It is impossible to state whether or not the rock facing was at one time carefully joined masonry or whether boulders were simply laid on the top and the flanks of the mound to serve as a protective cover. The latter seems the more likely explanation. Rock masonry walls were a part of the construction, however, as the foundations of these are visible on the summit platforms. Some of these may represent the remains of buildings or rooms. Other evidences of walls, particularly those forming a border to the different platform levels, may be the remnants of retaining facings built to hold the fill for the vertical planes of the platform levels.

The mound has been dug over by *huaqueros*. There are several places where it appears as though rock-lined cists or tombs have been opened. Human bones and fragments of obvious grave vessels are scattered around these cists and the old excavations. It is significant that most of the Huancaco Period sherds were recovered from such proveniences. The other ceramic component represented in the surface collections, sherds of the Early Puerto Moorin Period, was taken from the flanks and foot of the mound.

This disposition of the surface pottery and the presence of the truncated-conical adobes in the mound fill argues for a Puerto Moorin dating with a subsequent re-use as a cemetery during the Huancaco Period. The truncated conical adobes in the fill were observed in an old and deep excavation near the southwest corner of the mound. The adobes were tightly packed, although a considerable amount of gravel was mixed with them. As stated, they are truncated-conical in shape. They vary in length from 30 to 24 cm., in maximum diameter from 20 to 16 cms., and in minimum diameter from 16 to 13 cms. Other associations of hand-made, especially conical, adobes in the Virú Valley are with either the Guañape or Puerto Moorin Periods. Elsewhere on the north coast of Perú similar conical adobes have equally early cultural associations. On the other hand, adobes of the Huancaco Period are usually of the rectangular, mold-made variety.

V–230.—This mound lies in the now cultivated bottom land on the south side of the river just above the village of Huacapongo (Quad G–2, northwest). It is almost square, measuring about 60 meters. Height varies from 1.50 to 3 meters. Except for a lower section on the northwest side, the summit and sides are covered with boulders. On the summit, among the rocks, it is possible to pick out sections of rock walls here and there which probably once formed buildings now lost in the mass of toppled masonry. The formation of the mound aprons or terraces is not clear, although the northeast and northwest sides are lower than the rest of the mound. There is a small irrigation ditch, possibly prehistoric, running around the mound.

A number of graves have been successfully looted on the summit, and Huancaco Period potsherds were most common in the vicinity of these graves. Puerto Moorin sherds of the Early phase of that period were found on the flanks and at the foot of the mound.

V–300 (*San Francisco Mound No. 3*).—This is a large platform mound of earth and rock which is located in Middle Virú-North in old fields which have been lying fallow for several years (Quad D–3, northeast). The mound may have been a major construction of the Tomaval Period and will be described in that section of the report in greater detail. A small Early Puerto Moorin ceramic component was found at the site, however; and this suggests that some of the mound may have been built in the earlier period.

QUESTIONABLE PYRAMID MOUNDS

Explanatory note.—It has been pointed out that the numerous small earthen or adobe mounds of the middle and lower sections of the Valley are difficult to appraise, on the basis of surface examination, as to former construction, shape, and function. These may be any of three construction types: true pyramids which served as temple or house foundations; mounds built up by successive adobe-walled houses (referred to as "Dwelling-Construction Mounds"); or Earth and Refuse Mounds resulting from occupational debris, the piling up of *salitre*-impregnated soil, or both. Where excavation evidence was not available, I have classified these earth or adobe mounds into one of the three types upon the basis of visible adobe construction outcroppings and/or general form.

Two mounds, putatively of the Puerto Moorin Period, appear to be of the pyramidal type, although this cannot be definitely determined without excavation. These are sites V–95 and V–290. They are discussed separately from other mounds of the period because of their indefinite assignment as to functional type.

V–95.—This mound is located within the *monte* zone in Lower Virú-North (Quad C–3, northwest). Although no evidences of adobe construction are visible, the steepness and the sharp rectangularity of the mound suggest that it was artificially built of adobes or clay (pl. 14, *top*). It stands slightly over 5 meters above the plain, and the base measures 56 by 35 meters. The summit platform is well-defined and measures 35 by 5 meters. The orientation of the long axis of the mound is a little north of a northeast-southwest line. There has been some old digging on one side of the mound, but this revealed nothing in the way of structure. There was no evidence that burials had ever been found in the mound.

A pottery collection from the surface of the mound and the ground around its base is divided among the Early Puerto Moorin, Huancaco, and Tomaval Periods.

V–290.—This is an earth or adobe mound which may be either a purposeful pyramidal construction, a Dwelling-Construction Mound, or a combination of both into a small "Pyramid-Dwelling-Construction Complex." These complex sites of the latter-named type are known from the Gallinazo Period although only from the Late phase of that Period. V–290, however, dates from the Late Puerto Moorin phase, a considerably earlier era. It is a single component site with a ceramic dating rated by Ford as "excellent."

The mound, or mound mass, stands 6.50 meters above the surrounding field at its highest point (Quad B–4, southeast). The plat outline is egg-shaped, and the measurements are 190 by 100 meters with the long axis oriented northeast-southwest. The main pyramid or platform is the highest part of the structure, and there are two lower aprons or platforms which stretch out from this central summit in two directions. In the summit are evidences of old excavations, and the profiles of these show that the top of the mound was made of a hard, packed clay or, possibly, tapia adobe. No small unit adobes were observed.

EARTH-REFUSE MOUNDS

Six mounds in the middle or lower sections of the Valley, which are almost certainly earth-refuse accumulations, show Puerto Moorin Period components. These are:

V–234
V–236
V–272
V–302
V–306
V–309

V–234.—This mound is an isolated hill of earth in the fields of Middle Virú-South (Quad D–4, northeast). It is 3.25 meters above the fields at its highest point and slopes gently on all sides. Shape is roughly ovate with the long axis oriented southwest-northeast. The mound measures approximately 80 by 60 meters. Scrub trees now grow at the foot of the mound. Ash, sherds, and shell refuse are scattered over the surface. There is no evidence of successful grave digging nor are there any signs of adobe or stone construction on the surface. This mound is, apparently, a refuse and/or *salitre* heap. It is possible that the interior core is an old sand dune.

Two ceramic components are represented, Early Puerto Moorin and La Plata.

V–236.—On the highest point of a large stabilized dune between V–162 (Huaca de la Cruz) and V–238 (Huaca Larga) there is a mound which appears to be a midden of earth accumulation (Quad D–4, northwest). A collection of potsherds was made from an area of refuse concentration within a radius of 100 meters from the highest part of the hill. Evidences of occupation on other parts of the hill are very slight.

Puerto Moorin, Early phase, Huancaco, and Tomaval Periods are all represented.

V–272.—This site is described under the Guañape Period (see pp. 53–54) (Quad C–4, northwest). Puerto Moorin Period levels are represented in the mound. Presumably, it is a refuse and *salitre*-earth site.

V–302, *V–306*, *V–309.*—These are all mounds in the cultivated fields of Lower Virú-North (Quad C–4, northwest). All showed buried strata with refuse of the Puerto Moorin Period (unplaced as to phase). All appear to be refuse and *salitre*-earth accumulations rather than purposefully constructed pyramidal or Dwelling-Construction Mounds. (See site descriptions for the Guañape Period, pp. 54–55.)

FORTIFIED SITES

Explanatory note.—On the crowns of two of the large isolated hills lying within the Valley and on some of the high crests of the hills bordering the Valley are constructions dating from the Puerto Moorin Period which appear to have been, at least in part, fortifications. These fortification enclosures included dwellings and also small platform mounds. The latter may have had a religious significance and have served as shrines and as such fall within the category of "public buildings." Nevertheless, the dominant plan of all the sites discussed under this heading indicates that they functioned primarily as fortified retreats and/or lookout stations.

These sites are of two types. The larger and more elaborate type, the "Hilltop Redoubt," occupies the tops of domelike hills rising out of the Valley floor. There are two of these: V–80 (Bitín Fortress) and V–132 (Cerro del Piño). The type is characterized by an encircling wall of irregular-oval outline which follows the contours of the summit of the hill. Within the encircling wall the floor of the hill has been flattened and dressed, and room constructions and small platform mounds have been built.

The second type of hilltop fortifications, the "Hilltop Platform," is simpler and usually smaller. These are prepared and walled platforms atop the high peaks and crests along the sides of the Valley. They are generally constructed in a series of small terraces.

The following sites are classified as hilltop fortifications:

V–80
V–132
V–137
V–72
V–205
V–212

V–80 (Bitín Fortress).—Cerro Bitín is the largest and highest hill rising from the flat bottom of the Valley (Quad D–4, southeast) (pl. 15, *top*). It is isolated in Lower Virú-South just southwest of the Pan-American highway on the edge of modern cultivation. The total mass of the hill is 1,500 by 1,000 meters. At the crown, the elevation is between 290 and 300 meters above sea level, and this averages about 240 meters above the surrounding Valley floor. The ascent on all sides, except for a spur on the southeast, is precipitous and impressive. Weathering of the hill is advanced, and the only noticeable rock outcrops of any size are at the top. The flanks of the hill, especially on the seaward side, are piled deep with drift sand.

The total length of the stone-wall enclosure, which follows the west-northwest orientation of the long axis of the hill, is 400 meters, and at its widest point it is just under 100 meters. Within the enclosure the summit is relatively flat except for three natural high points, on all of which mounds and rock-walled rooms have been constructed. The most westerly of these high points is the lowest; the central knoll is intermediate in height; while the easternmost is the highest. Between the central and easterly eminences there is a low swale or natural saddle in the hilltop.

The westerly eminence is topped by an artificial conical mound of rock 3 meters high and 25 meters in diameter (fig. 18). Near this rock pile are the stone foundations of two large connected rooms and, possibly, a third. One of these rooms is rectangular, measuring 15 meters square, and in its center is a modern Catholic shrine. The second room is roughly ovoid, measuring about 18 by 13 meters. At a somewhat lower elevation, toward the extreme westerly end of the hill, but still within the main enclosure, are the remains of a building of at least 10 rectangular rooms. The largest of these rooms is 9 meters square; the others are less than 5 meters square. Along the inside of the main enclosure wall, just to the northwest of the knoll, there are remnants of what must have once been a series of rock-walled rooms built against the larger enclosure wall. These rooms average about 6 by 12 meters.

The outstanding feature of the central eminence is a rectangular pyramid or platform mound 2 to 3 meters high and with a length and breadth of 8 by 11 meters (fig. 18). A stone wall outlines the summit of the mound. This wall may have been the foundation of a building or it may have been made merely for retaining purposes. The body of the mound is of earth and rock. Off to the southeast of the mound, but connected to it, is a group of small contiguous rooms. Only 6 or 7 are still discernible, but there are indications that there were formerly twice as many. A few rooms had also been placed at the northwest edge of the mound.

The highest eminence, at the eastern end of the enclosure (pl. 15, *center*), is also topped by a Pyramid Mound (fig. 18). This one is about 2 meters high, is more circular than rectangular, and is about 14 meters in diameter. Its summit may once have been completely ringed by a stone wall, but the evidence for this is not complete. The foundations of a rectangular stone room, within the outer perimeter of the mound top, are quite clear. This inner room is 12 by 7.5 meters. It is connected to, and squared with, a still larger stone rectangle extending off to the northwest. This larger rectangle is 18 by 12 meters, and at its end farthest from the mound is divided up into 5 or 6 smaller rooms. South and east of the mound, at a distance ranging from 2 to 13 meters, is a semicircular wall enclosing the mound and adjoining building. This semicircular wall follows the contour of the natural hill, and may have been a secondary defense, within the outer enclosure.

The outer encircling wall of the hilltop fortress is of double-faced rock masonry with a rock-rubble-core fill. It stands, on the average,

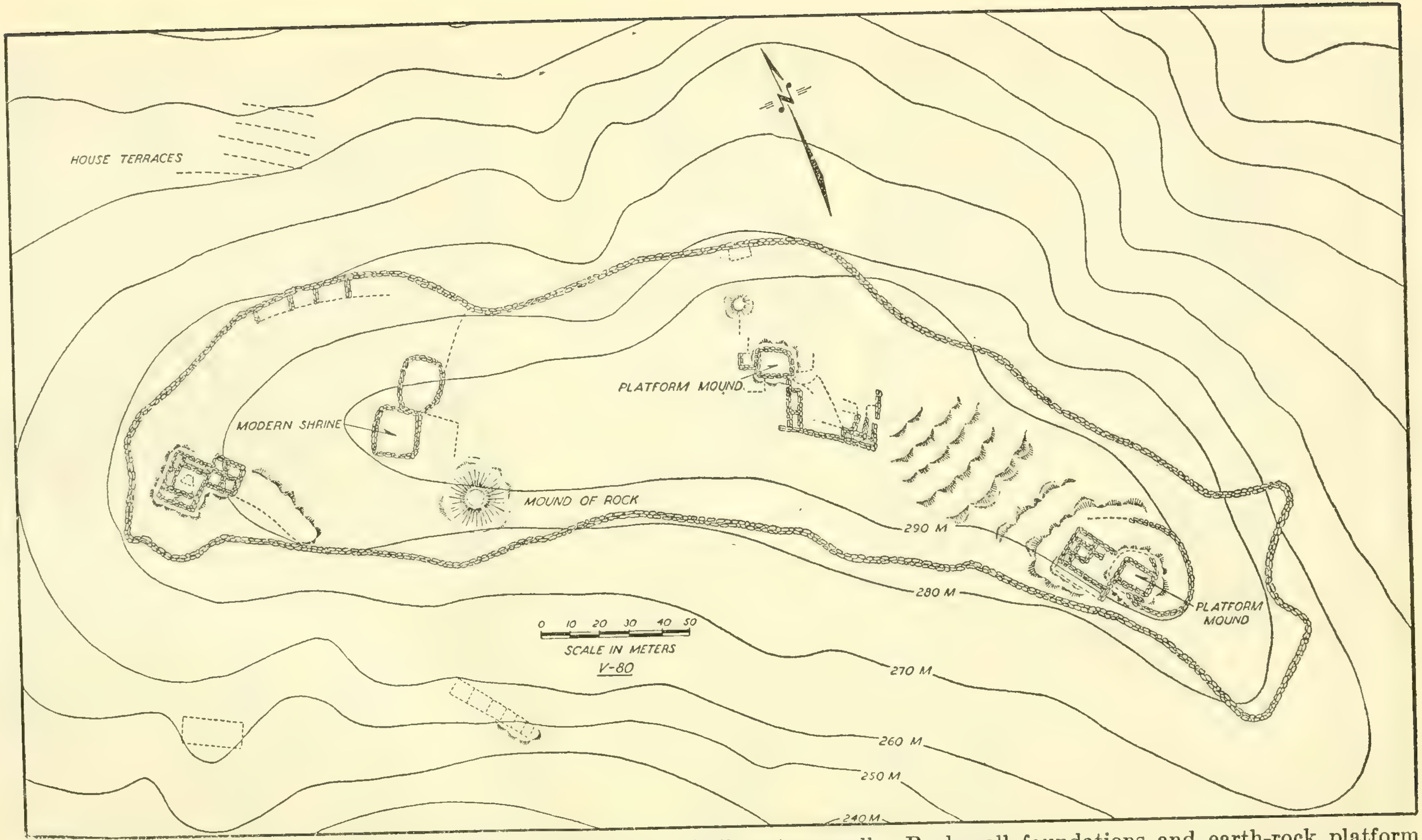
HOUSE TERRACES
PLATFORM MOUND
MODERN SHRINE
MOUND OF ROCK
290 M
280 M
270 M
260 M
250 M
240 M
PLATFORM MOUND
0 10 20 30 40 50
SCALE IN METERS
V-80

FIGURE 18.—Site V–80 ground plan. Hilltop redoubt with encircling stone wall. Rock-wall foundations and earth-rock platform mounds within enclosure. Early Puerto Moorin Period.

about 1 meter high, but, judging from the amount of fallen rock, was perhaps twice as high when in use. The boulders used in its construction average 70 to 80 cm. in diameter and are chinked with flat rock spalls.

On the flanks of the hill, a little way down on the northwest side, are a series of cleared and rock-walled house terraces of unknown date. Several other similarly situated house platforms were noted farther down the slope on the northwest and on lower subsidiary spurs on the southwest. Extensive cemeteries are reported from the foot of Bitín on the north, but these were not explored. Sites V–79, V–81, and V–82, all of later periods than the fortress, lie on the southeast and south flanks.

The Fortress conclusively dates as of the Early Puerto Moorin Period.

The function of the V–80 site was as a complex for defense, living, and public ceremony. A natural strategic location had been utilized and improved upon by a large outer defense wall. Within this perimeter other structures served other purposes but served them within the larger scope of the problem of defense. The small flat-topped mounds or pyramids probably were shrines or the bases for sacred buildings. The houses and rooms housed the garrison of defenders or refugees who sought shelter in the fort. About 25 rooms can be made out among the stone-foundation patterns now visible. Probably another 10 rooms were once in existence. That the temple platforms were found within the fortification enclosure may have symbolic significance. Such edifices of religious and social importance were probably placed within the stronghold as these represented the vital nuclei of the tribe.

V–132 (*Cerro del Piño*).—Cerro del Piño is a low dome-shaped hill in Lower Virú-South lying midway between the Huancaco hill block and the river (Quad C–4, southwest). It is one of a series of weathered hill masses extending out across the Valley from the Huancaco block. Compared to Bitín it is low (about 30 meters above the Valley floor) and irregularly shaped. Its total area measures about 1,000 by 700 meters. An irregular-oval rock-wall enclosure, oriented northeast-southwest, tops the highest part of the hill. This enclosure is similar to the Bitín enclosure, although smaller, measuring only 200 by 60 meters. Like Bitín, there are three natural high points within the walls, and on two of these heights artificial rock mounds have been constructed (fig. 19).

On the northeast hillock or eminence there are two rectangular pyramids or platforms, neither over 2 meters high. The larger is 10 by 15 meters, the smaller 8 by 6 meters. They are 10 to 15 meters apart and are connected by the foundations of a stone wall. In the area between them and off to one side are the indeterminate evidences of a few small rock-walled rooms.

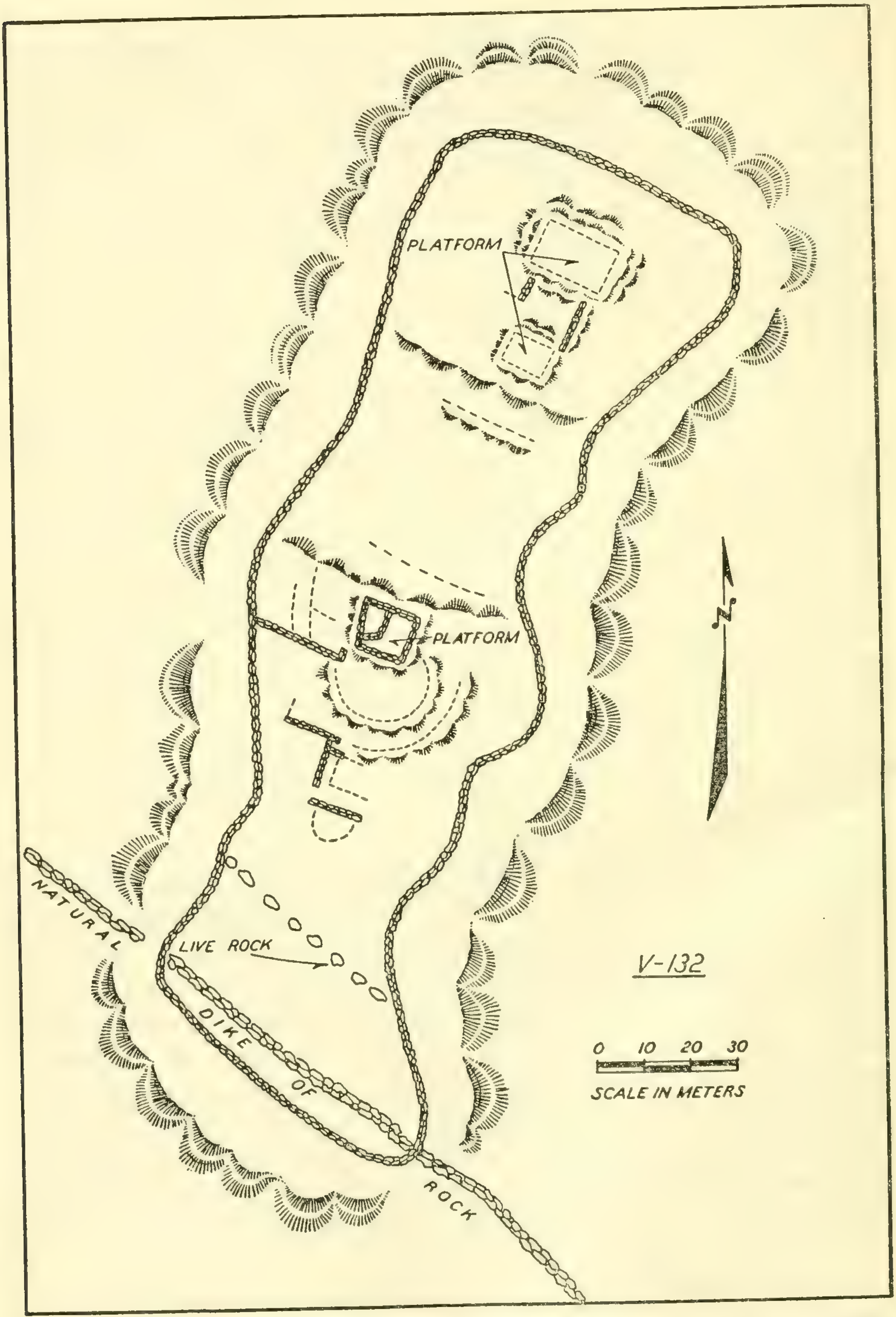
PLATFORM
PLATFORM
N
LIVE ROCK
NATURAL
DIKE
OF
ROCK
V-132
0 10 20 30
SCALE IN METERS

Figure 19.—Site V–132 ground plan. Hilltop Redoubt similar to V–80 (see figure 18). Puerto Moorin and Early Gallinazo dating.

The slightly lower central eminence is capped by a rectangular mound platform (pl. 15, *bottom*), 10 by 12 meters and about 2 meters high. The summit of this platform is enclosed in a rock wall and within this enclosure a single small room has been partitioned off in one corner. In the area west and southwest of the mound are vague evidences of connected rock-walled rooms.

The extreme southwestern end of the enclosure has no remains of artificial structures other than the outer enclosure wall. At this end there is a slight eminence formed by a natural rock dike running transversely through the enclosure on a northwest-southeast axis.

The outer enclosure wall of V–132 is less than 1 meter wide, and is built of angular-fractured rock, the stones averaging about 40 cm. in diameter. Both the enclosure wall and the rooms within it are poorly preserved. All walls were made, presumably, by the double-faced technique. Within the enclosure there is some, but not abundant, refuse, and the natural bedrock of the hill is exposed in a number of places.

The V–132 fortress dates from both Early and Late Puerto Moorin as well as Early Gallinazo.

V–132 is so similar in plan and construction to V–80 that there can be little doubt that the two sites served the same purpose, that of a hilltop fortification and refuge or central fortified community. Neither site is immediately surrounded by numerous sites of the Puerto Moorin Period although the distribution map for the period (fig. 11, p. 62) shows several sites within a kilometer or two of each.

V–137.—In the hill massif we have referred to as the Huancaco block, the highest crest lies about 2 kilometers southeast of site V–88–89 (Castillo de Huancaco) (Quad C–5, northeast). The elevation of the crest is probably 250 meters above sea level, and on all sides hills and ridges extend for 2 to 3 kilometers, making the site extremely difficult of access.

Evidences of house platforms or rock-walled terraces are strung out along the top of a high ridge in ascending step fashion for several hundred meters. These terraces are not continuous but occur in 4 groups which are separated by gaps in which there are no walls, terraces, or signs of cultural refuse. Each string of terraces terminates, at the highest level, on a large top terrace or platform on which there are rock-wall foundations. These foundations show that 5 or 6 conjoined rooms were arranged in a single row on the platform. The rooms usually occupy the full width of the platform or the flattened top of the ridge and range in size from 7 to 4 meters square.

The fourth and highest terrace-platform group is also the largest and most complex part of V–137. Here, the upper platform is capped with what appears to be an artificial, or partly artificial, rock pyramid or platform mound. This is flat-topped, rounded in outline, and about 7 meters in diameter; two apron-platforms are attached at a lower level. These aprons are semicircular in outline, and both are defined by rock walls which still stand higher than the floor level of the interior fill. A rock wall flanks the platform just below and to the west, and seems to have been built to enclose and protect a cleared area just below the mound.

Pottery was scarce in all of these house groups on the ridge, but a small collection dates the site as Late Puerto Moorin.

This is the second type of hilltop fortified site. It differs from V–80 and V–132 in that it is not a redoubt unified by an enclosing wall but a series of house platforms which are defensible because of their position on a mountain ridge. Such sites as V–137 may have been permanently occupied but are too small to have served as a retreat for many people from dwellings in the Valley bottom. Yet their precarious position and the difficulty of access to them clearly shows that they were selected with defense in mind. The artificial rock mound in the highest and most remote of the house groups is like those of the enclosure sites and also much like the little hill-spur platform mounds of the Guañape Period.

The four house groups of V–137 total about 20 to 25 house platforms. As stated, these platforms are fairly large and may have been the bases for more than one room, although there is no foundational evidence for this. Buildings may have been made largely of stone for available material is abundant on the slopes immediately below most of the platforms. It is, of course, possible that walls were of adobe and have entirely disappeared through weathering.

V–72 (*Sarraque*).—This is the highest point on the Sarraque spur which extends out in the Valley to form the natural division between Huacapongo and the Virú proper (Quad E–2, northeast). It is a strategic site which dominates the juncture of Huacapongo, Upper Virú, and Middle Virú. Elevation above sea level is slightly over 300 meters[29] and height above Valley floor, at this point, is 170 meters. The site is an old lookout or strong point which was used during several periods of the Valley's history. However, its principal occupation, judging from ceramic evidence, was in Late Puerto Moorin times.

In total area it is 100 meters east–west and from 60 to 20 meters north-south.[30] There are no structures of any consequence. The natural hill has, however, been artificially flattened and dressed around the sides. At the west end there is a little flat-topped rise, probably natural, which is about 20 meters in diameter and roughly circular.

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[29] This elevation is questionable. The V–72 summit is at least 270 meters, but may not be 300 meters. (See footnote, p. 169 for further discussion of this.)

[30] This site is only partially shown on the map in fig. 34.

East of this little knoll there are some evidences of rock walls, suggesting a rectangular building or enclosure which once must have measured about 22 by 13 meters. Still farther east, there is a natural terrace stepping down to a continuation of the prepared Hilltop Platform. And continuing still farther east, and at a lower level, are the beginnings of the Gallinazo Period adobe constructions of the Castillo de Sarraque (see pp. 168–175). Below the crest of V–72, on the south side, there are remains of house platforms with adobe walls. It is likely that these date from the later period of the Castillo and are not of the crest site.

The site resembles V–137 in that it is essentially a defensible platform or serried platform which may have been used for permanent habitations as well as a fortified post. The small natural knoll at one end of the platform may have been the base of a shrine.

V–205 (*Corral Hill*).—Near the Corral Hill bench-mark, on the spur that divides the larger Niño Quebrada on the east from the small Tomaval Quebrada directly back of the Hacienda Tomaval (Quad E–2, southeast), there is another crest-terrace site similar to V–137 and V–72. This is in the Huacapongo-North division of the Valley.

The site consists of four stone-walled houses on four ascending terraces. The houses are two-room units with rooms about 3 meters square. In each case, a room is on a slightly higher or lower level than the one joined to it.

Early Puerto Moorin sherds were picked up in the vicinity of the houses; and La Plata sherds were found in the same area in the vicinity of old opened graves. Possibly, the site was used as a lookout or habitation, as well as a cemetery, by the La Plata people; but it is clear the Puerto Moorin people once inhabited the place and probably built the houses whose foundations are still standing.

V–212.—This Hilltop site is located on the crest of the ridge separating Huacapongo from the Middle Virú (Quad E–2, northeast). The peak is an extremely high and steep one, probably rising well over 300 meters above sea level. The site group is composed of about 15 rectangular houses, or stone house foundations, arranged steplike on a series of terraces leading to the very top of the mountain. In this situation the buildings have a fortified or defensive aspect.

Dating is somewhat more complex on this site than the others. Two collections were made, one from within the houses and a second from the slopes just below the house platforms. The first collection is Tomaval and later periods; the second collection is about evenly divided between Tomaval and the Early phase of Puerto Moorin. This indicates a Tomaval and later reoccupation, and maybe, a rebuilding, of a former Puerto Moorin site; but in view of the similarity of these crest-terrace houses with others incontrovertibly of the Puerto Moorin Period, it is likely that during their occupancy of the site the Puerto

Moorin people constructed very similar buildings. The precipitous location is, in this case, certainly a limiting factor in determining the form of the constructions, so that the Puerto Moorin and Tomaval community at V–212 was probably much the same.

CEMETERIES

Only four cemeteries of the Puerto Moorin Period have been located in the Valley. These are:

V–66	V–101
V–94	V–218

V–66 (*Puerto Moorin Site*).—This site, located in the pampa and *monte* fringe in Lower Virú-North, has been discussed in the previous section on dwelling sites (pp. 69–70) (Quad B–3, northwest). For the past several years, since the discovery of the Salinar style by the Larcos (Larco Hoyle, 1944, p. 1; 1946, p. 155), this locale has been known as the principal source of Salinarlike grave pottery in Virú. Judging from the appearance of old grave excavations, and from more recent work conducted here by Strong and Evans (personal communication, 1946), the Puerto Moorin Period burials at V–66 were simple inhumations made in clean sandy or midden soil. Depth of the graves ranged from less than 1 meter to 2.50 meters. In many instances this is less than actual grave depth, as the original grave pits have been covered with a half to a full meter of drift sand. The pits which I saw averaged about 1.75 meters in length and 0.80 of a meter in width.

Between 20 and 30 old grave excavations were noted, and, in addition, Strong and Evans uncovered 11 burials of the period. It should also be mentioned that V–66 had been re-used as a cemetery during the Tomaval Period.

V–101.—In the midden site V–101 (Quad B–3, northwest) there are evidences of grave digging. The broken grave ceramics left on the edges of the pits showed that they were opened Early Puerto Moorin burials. Around two or three graves were a number of rocks, each about 10 to 15 cm. in diameter. They appear to have been exhumed from the grave and may have lined it.

V–94.—This is a very small cemetery area in the edge of the thick *monte* in Lower Virú-North, just south and east of the Purpur dune (Quad B–3, northeast). Ten to twelve old excavations are still visible in the sand. Sherds found appear to be grave discards, and all date from the Late Puerto Moorin phase.

V–218.—This cemetery is in Huacapongo-South (Quad E–2, northeast), and is situated in a small quebrada opening out of the valley wall. The graves are on a remnant of an old alluvial fill in the quebrada bottom. Recent washes, occurring since the burials were made, have cut part of this fill away. The area of grave pits is about 125 by 40 meters. The excavations appear to be very old and the discarded pottery and human-bone fragments are not plentiful. The collection, all apparently from graves, dates from the Early Puerto Moorin phase and from the Tomaval Period.

TABULAR SUMMARY OF SITE TYPES OF THE PUERTO MOORIN PERIOD

Early phase

Living sites:	
Exposed Dwelling Sites:	
Scattered Small-House Villages	2
Agglutinated Villages:	
Irregular Arrangement	6
Irregular Arrangement (probable)	5
Compound Villages: Rectangular Enclosures	1
Midden accumulations	36
Earth-Refuse Mounds	2
Community or ceremonial structures:	
Pyramid Mounds	10
Pyramid Mounds (questionable)	1
Fortified strongholds or places of refuge:	
Hilltop Redoubts	2
Hilltop Platforms	2
Cemeteries	3

Late phase

Living sites:	
Exposed Dwelling Sites:	
Scattered Small-House Villages	1
Agglutinated Villages: Irregular Arrangement	1
Midden accumulations	4
Community or ceremonial structures: Pyramid Mounds (questionable)	1
Fortified strongholds or places of refuge:	
Hilltop Redoubts	1
Hilltop Platforms	2
Cemeteries	1

Unplaced as to phase

Living sites:	
Exposed Dwelling Sites: Agglutinated Villages: Irregular Arrangement	1
Midden accumulations	2
Earth-Refuse Mounds	4

THE GALLINAZO PERIOD

PERIOD DEFINITION

The Gallinazo Period has been divided into three ceramic subdivisions corresponding to Ford's (1949, fig. 4) time intervals "I–H," "H–G," and "G–F." These are the Early, Middle, and Late phases used here. They parallel Bennett's (1950) tripartite chronological divisions of Gallinazo I, II, and III. On Ford's time chart, these three subperiods of Gallinazo are assigned approximately equal spans of time, each of which is estimated as being the same length as the subperiods or phases of the preceding Guañape and Puerto Moorin Periods.

The Early Gallinazo phase ("time I–H") shows a marked increase in Castillo Plain, a pottery type which first appeared in Late Puerto Moorin. Conversely, Huacapongo Polished Plain is a fast-dying type during Early Gallinazo. Simultaneously, there appears a series of types which divide Gallinazo from Puerto Moorin.[31] These are Valle Plain, Gloria Polished Plain, Sarraque White-on-red, Castillo Modeled, and two negative painted types, Gallinazo and Carmelo. It should also be mentioned that a black ware tradition is reestablished in Early Gallinazo with the minor appearance of two types, Tomaval Plain and the companion Queneto Polished Plain. These types expand much later in the Virú sequence to dominate the pottery picture.

Middle Gallinazo is separated from Early by percentage configurations in types. Valle Plain increases in numerical importance and the old Puerto Moorin type, Huacapongo Polished Plain, virtually disappears. The various decorated minority types continue more or less as they were with a slight dwindling of Sarraque White-on-red. Castillo Plain and the two black ware types remain unchanged in frequency.

The Late Gallinazo phase shows Valle increasing very slightly and Castillo just beginning to decline. Significant as time-bearers are a number of vessel forms that distinguish Late Gallinazo from Middle and Early. The minority decorated types remain to the end of the phase. Tomaval Plain begins to increase.

In grave furniture, the Gallinazo Period is known for its negative painted and semirealistically modeled vessels. These types, illustrated by Larco Hoyle (1945 b) and by Bennett (1939, 1950), relate to the refuse stratigraphy through the presence of small amounts of the negative ware (Gallinazo and Carmelo Negative Painted).

SITE DISTRIBUTION

The Gallinazo site distribution contrasts with Puerto Moorin in the near desertion of the Huacapongo drainage and the concentration of communities in the Lower Valley (figs. 20, 21). This Lower Valley concentration is the Gallinazo Group cluster (Bennett, 1950) on the northwest margin of the present cultivated area. There is also a

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[31] Ford (1949, pp. 63–65, figs. 4, 5) tends to emphasize the ceramic continuities between Puerto Moorin and Early Gallinazo. Bennett (1950, pp. 113–115), who feels that new population elements were entering Virú from the highlands at this time, sees a greater break.

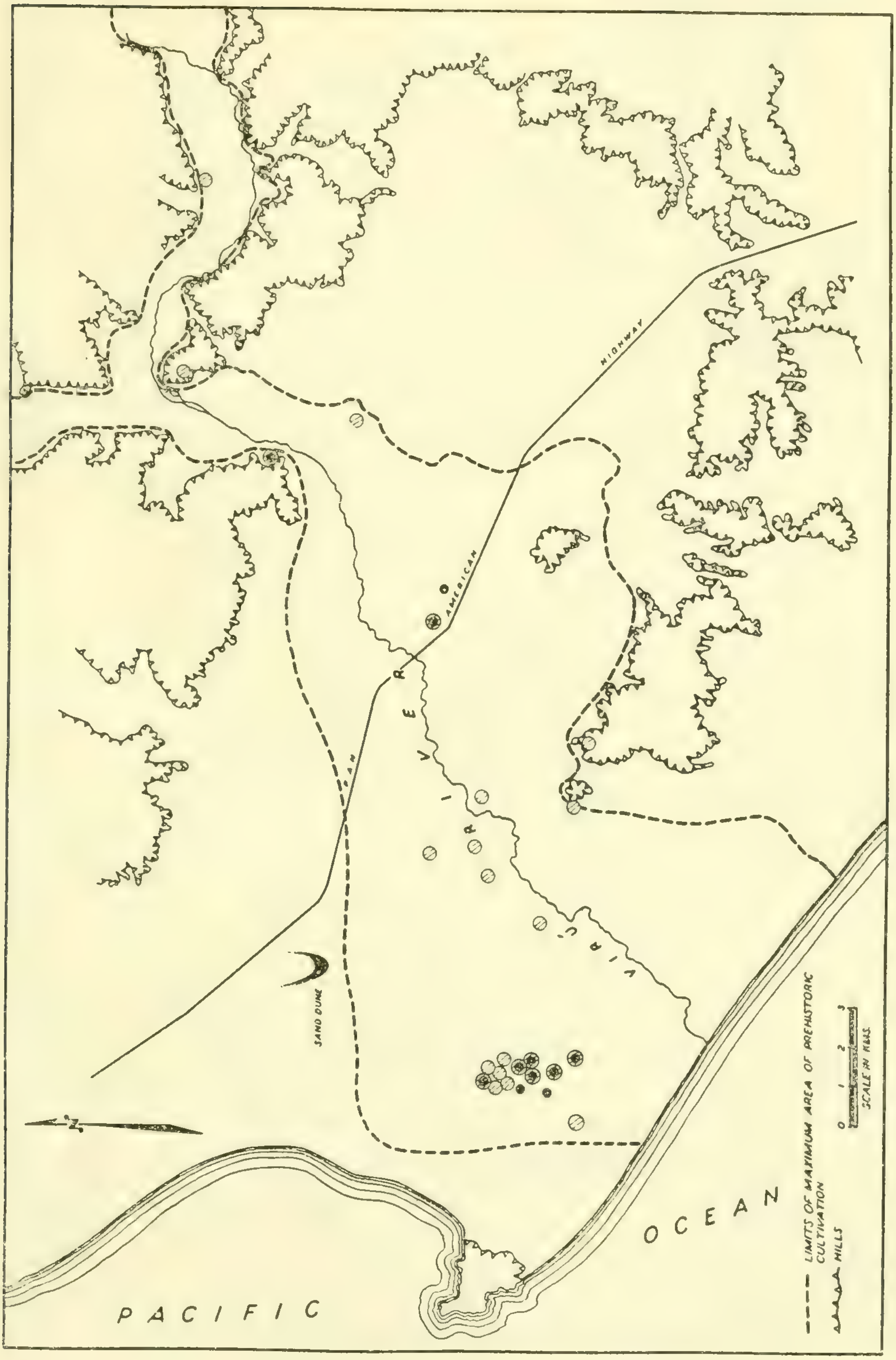

PACIFIC
OCEAN
VIRÚ RIVER
PAN AMERICAN HIGHWAY
SAND DUNE
N
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS.

FIGURE 20.—Site distribution map of the Gallinazo Period. Early phase, black dots; Middle phase, hatched dots.

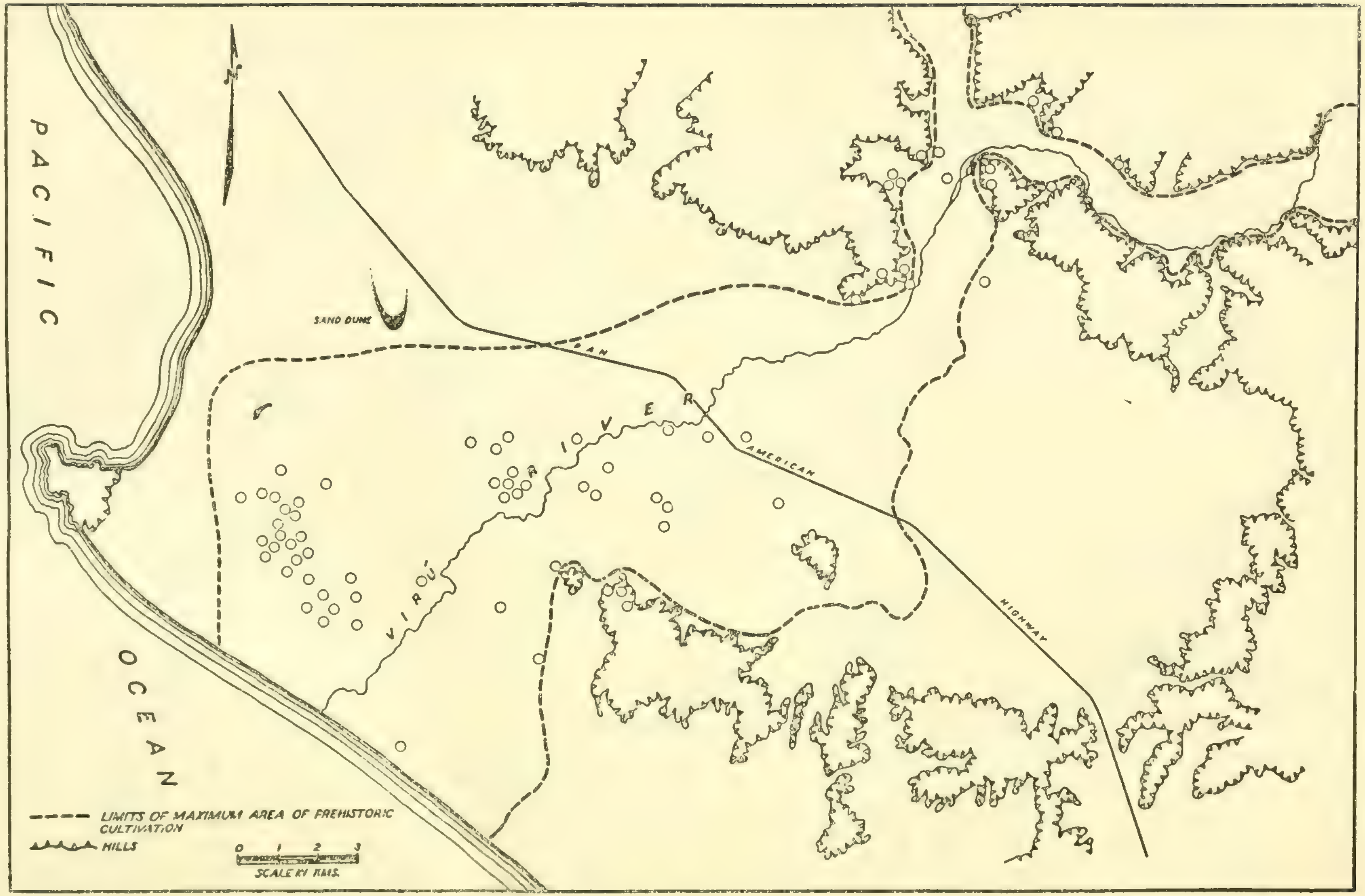

N
PACIFIC
OCEAN
SAND DUNE
VIRU RIVER
PAN AMERICAN HIGHWAY
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS.

FIGURE 21.—Site distribution map of the Late phase of the Gallinazo Period. Gallinazo sites unplaced as to phase also included.

modest Lower Valley increase in the number of sites in the Valley bottoms nearer to the river. Upriver, there are Gallinazo site clusters around the "Castillo" sites of V–51 (Castillo de Tomaval), V–73–74–75 (Castillo de Sarraque), and V–16 (Castillo de San Juan). All of these areas were not uninhabited during Puerto Moorin, but it is evident that they assume more importance in Gallinazo times. The Huacapongo drainage has a few Gallinazo sites but nowhere near the number that it had in the Early Puerto Moorin Phase.

Of the 94 Gallinazo sites in our survey record, a good many were occupied for more than one subperiod. There are 13 Early phase occupations, 28 of the Middle phase, 64 Late phase, and 13 are unplaced as to phase. In many instances Early or Middle occupations were discovered under Late phase deposits only by the excavating parties. In the light of this, there is a strong possibility that many more Early and Middle phase sites lie buried, especially in the Lower Valley, and that the numerical breakdown of sites by phase does not approximate the true population picture.

There are no Early Gallinazo sites in the Huacapongo or the upper portions of the Middle Valley. This is a reliable datum, for, as we explained in the Puerto Moorin discussions, the flanks of the upper reaches of the Valley are not covered with deep sediments nor have they retained deep refuse accumulations. Our failure to find Early Gallinazo sites in these parts of the Valley quite probably indicates that they do not exist. This, it will be recalled, checks with the near absence of Late Puerto Moorin sites in the Huacapongo and nearby regions. We can fairly conclude that the Huacapongo, Upper Virú, Queneto, and immediately surrounding areas were deserted throughout the Late Puerto Moorin and Early Gallinazo subperiods. Late Puerto Moorin sites were found mostly in the Lower Valley, and, as Early Gallinazo sites are mainly confined to the Lower Valley, there is a continuity of distribution here between Late Puerto Moorin and Early Gallinazo.

When we come to Middle Gallinazo there is, again, a minor upvalley expansion. This does not have the density of the Early Puerto Moorin settlement of the Huacapongo, but there are three Middle Gallinazo sites in the Huacapongo and four in central Virú Valley. The Middle phase is also well represented in the Lower Valley both along the river and in the Gallinazo Group. In the latter, it should be pointed out that there are 11 sites out of 15 where Middle phase materials were found under or in conjunction with Late Gallinazo deposits. As with the Early phase, it is likely that many more Middle Gallinazo sites are buried beneath Late Gallinazo remains.

Late Gallinazo continues the Lower Valley concentration, and the Gallinazo Group population probably reaches a climax at this time.

There are also more sites in the Valley bottoms and on the south side of the Valley than in the Early or Middle phases, and two midden areas were noted near the beach. The upper section of the Middle Valley, around the four castillos (V–51, 68, 16, 73–74–75) and the Queneto quebrada, is now substantially occupied, and there are three or four sites in the Huacapongo. Thus, the general pattern is similar to, but more intense than, the Middle Gallinazo phase.

SUMMARY OF SITE TYPES

Sites of the Gallinazo Period are composed of the same four functional categories as the Puerto Moorin Period: (1) living sites; (2) community or ceremonial structures; (3) fortified strongholds or places of refuge; and (4) cemeteries. The living sites are divided into four descriptive classes. Three of them, "Exposed Dwelling Sites," "Additional Occupation Sites," and "Earth-Refuse Mounds," are comparable to sites of the same classes that we discussed under the Puerto Moorin Period. The fourth class, the "Dwelling-Construction Mound," accumulation resulting from superimposed building of dwelling sites, was not reported for the Puerto Moorin Period. Dwelling-Construction Mounds are in the Middle and Lower Valley, and the structures which they contain are made of adobe. Bennett's (1950) excavations have shown that their builders filled old houses and rooms with earth, sand, and refuse and used these filled structures as pediments for later structures. On surface appearance alone, without excavation, they are often difficult to distinguish from Earth-Refuse Mounds or Pyramid Mounds.

The Exposed Dwelling Sites represent several types. The Scattered Small-House Village of Guañape and Puerto Moorin has disappeared, but the Agglutinated Village and Compound Village are still present, and a new type, the Semi-isolated Large-House makes its appearance.

Three sites, V–63, V–76, and V–229, are definite examples of the Irregular Agglutinated Village clusters. The V–76 site has been constructed largely in terraces and consists of, perhaps, 100 rooms. V–63 and V–229 are on slightly sloping ground and are only partially terraced. Each probably totaled 30 or more compartments.

V–39, on the floor of Queneto quebrada, is a compact, symmetrically laid-out site that I have classed as Regular Agglutinated as opposed to the Irregular Agglutinated arrangements just discussed. V–39 is not a Compound or enclosed site, and its over-all outlines are not rectangular; nevertheless, it gives the impression of having been built to a plan rather than at random. There are some 20 rooms in V–39, and most of them are rather small.

V–51 and V–131 are Agglutinated sites, but their irregularity or regularity of arrangement could not be determined from the evidence available.

V–219 is a Compound of the Rectangular Enclosure subtype. It is situated on a steep hill slope and has an interior terraced arrangement of rooms. Unfortunately, the foundations of the rooms were poorly preserved, and no good patterns could be obtained. V–18 is an extensive village and midden area. One of its features is a Rectangular Enclosure Compound divided into five small- and medium-sized rectangular compartments.

V–34, V–40, and V–43 are what I have called Semi-isolated Large Houses. These are buildings with one or two large rooms. These rooms vary from 11 by 7.50 to 14.50 by 9.50 meters in the present examples. Attached to the large rooms are, sometimes, one or two quite small, closetlike rooms. V–34 and V–43 are definitely isolated. In the case of the former, I surveyed no other Gallinazo Period sites in the neighborhood of several hundred meters. For the latter, there were contemporaneous sites of the same type (V–40) and of the Regular Agglutinated type (V–39) within 100 to 200 meters. The site V–40 may have been a group of several of these Semi-isolated Large Houses; however, only the foundations of two are distinct.

All of the exposed dwelling sites of the Gallinazo Period belong to the Late phase of that period, with the possible exception of V–51. Most of them are now only low stone foundations of double-faced, cyclopean masonry. In sites V–51 and V–18, rectangular, mold-made, cane-marked adobes were found subsurface in the walls of buried buildings; and it seems likely that the walls of some of the surface houses which we mapped at these sites were, also, constructed of the cane-marked adobes. V–131 was built entirely of adobes, most of them wedge-shaped and hand-made, although a few of the rectangular, mold-made, cane-marked variety were observed in the walls.

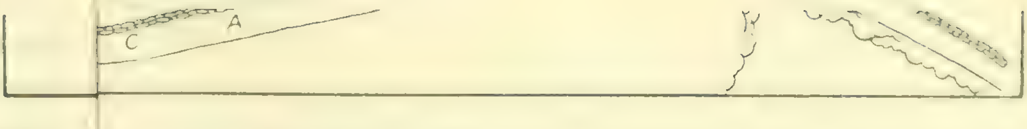
Gallinazo midden sites date largely from the Late phase. Several of these are superficial deposits of from 100 to 200 meters in diameter. There are, of course, numerous examples of deep Gallinazo refuse. The rubbish and superimposed house floors in the V–51 village area are several meters deep as is the debris around the platforms of the V–59 dwelling and pyramid site.

Earth-Refuse Mounds show Late phase pottery on the surface, but excavation in several revealed Middle phase levels. There are 16 of these which date wholly, or in part, from Gallinazo times. They are all dun-colored earth hills, for the most part located in the midst of watered fields. Their shape is amorphous and unstandardized. In size they will range from 12 by 20 up to 175 by 100 meters in extent and from 50 cm. to 4.50 meters in height. Average dimensions would be somewhere nearer the lower figures.

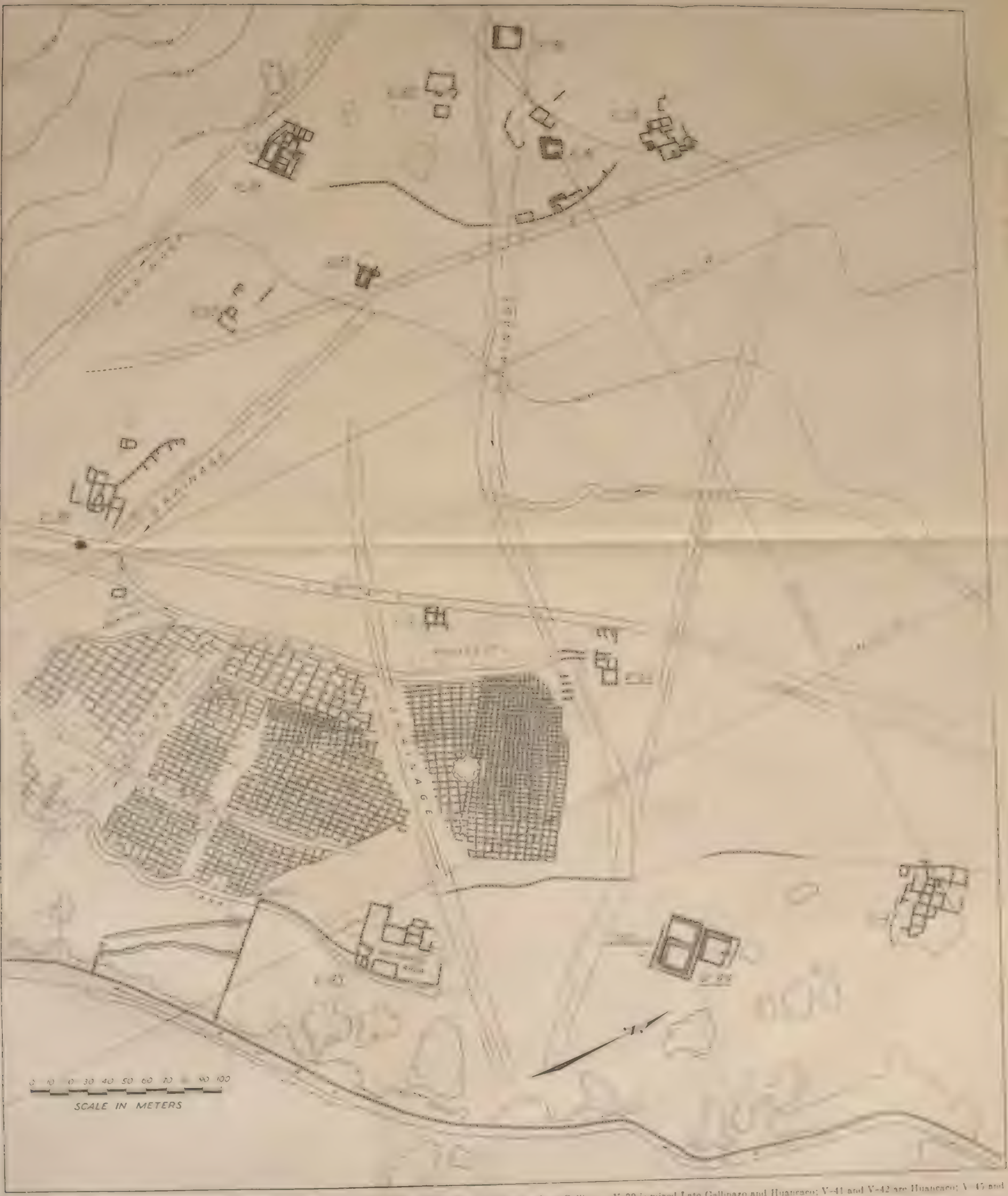
Dwelling-Construction Mounds divide in dating among the Early, Middle, and Late phases, and there is stratigraphic evidence from several to indicate that the same mound locations were used for successive occupations through successive phases. Some were also later utilized as living sites and places of burial for the post-Gallinazo periods. The adobe-walled buildings at the core of the Dwelling-Construction Mounds are clusters of conjoined small rooms. Bennett's (1950, see pp. 53, ff.) relatively small-scale clearings and cuts have shown small (1.25 by 1.25 to 3.00 by 4.00 meters) adobe-walled rooms joined to one another in a solid honeycomb arrangement. Concerning these room arrangements he says:

> The characteristic honeycomb pattern of arrangement is found throughout the total period (Early, Middle, and Late). Numerous rooms are crowded together, seldom separated by passages, corridors, or courts. Windows are totally lacking in the houses and doorways are uncommon, although indicated in the late phase. The practice of entering houses through the roof is a Gallinazo characteristic. The walls are generally oriented north to south and east to west. The few exceptions are surprising, since the grid pattern of the oriented walls is so overwhelmingly typical. In spite of this emphasis on orientation, there is little indication of village planning. Instead, the impression is one of a gradual amorphous growth, expanding outward and upward from a core structure. [Bennett, 1950, p. 64].

From this it would appear that the Gallinazo Dwelling-Construction Mounds contain the Agglutinated type villages. The sketches of room arrangements which Bennett (1950, figs. 13, 16) shows of his excavations in sites V–257 and V–265 substantiate this. Room walls are, for the most part, carefully alined. The sites are very compact. Some of them may be of the Regular Agglutinated variety while others are, perhaps, Irregular in arrangement. We lack sufficient exposure of the room patterns to be certain of this point. As both Regular and Irregular varieties of the Agglutinated site are found in the rock-walled foundations of the upper part of the Valley for the Gallinazo Period, it is reasonable to suppose that both patterns were present in adobe construction in the Lower Valley. The absence of doors in the Dwelling-Construction Mound sites is curious and implies roof entrance and a subterranean or semisubterranean quality to the chambers. The Exposed Dwelling site patterns of the same period show occasional doors, although many room foundations are without doors. However, the data here are not comparable as Bennett was working with adobe walls of considerable height while our observations on the Exposed Sites were concerned with low foundation remnants. Furthermore, all of the Exposed Dwelling sites of the upper sections of the Valley date from the Late phase, a subperiod when some doors were also noted in the Dwelling-Construction Mound sites.



FIGUR allinazo and Huancaco; V–41 and V–42 are Huancaco; V–45 and
n plots with low stone ridge partitions.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0 10 20 30 40 50 60 70 80 90 100
SCALE IN METERS

FIGURE 22.—Ground plan of various sites at center of mouth of Queneto quebrada. Sites V-40 and V-43 date as Late Gallinazo; V-39 is mixed Late Gallinazo and Huancaco; V-41 and V-42 are Huancaco; V-45 and V-49 are Tomaval; V-44 and V-47 are La Plata; and V-55, V-56, and V-57 are undated. The checker squares are cultivation plots with low stone ridge partitions.

The size of the Dwelling-Construction Mound communities varies from small settlements of a few houses with over-all measurements of 18 by 13 meters and a height of 1.50 meters to sites 110 by 60 meters in diameter and 7 meters high. These larger ones exceed, in area, the Agglutinated Villages of the Gallinazo Period in the upper portions of the Valley. The shape of the mounds is very irregular. They may be ovoid or they may have arms or extensions. In height, they may have one or more summit areas separated by low platforms or saddles. In some cases the full height of the mound was found to be wholly artificial, resulting solely from the superimposition of one layer of houses on top of another. Other sites, such as V–162, V–235, or V–238, are, obviously, only partly artificial with natural sand dunes as bases.

The walls of the rooms in the Dwelling-Construction Mounds are thin (30 cm.) but frequently high (2 meters or more). In some places, the same series of walls were carried upward from a lower building level. In these cases, the old room would be filled and a new floor of clay constructed within the same walls. Tapia, ball adobes, rectangular mold-made, cane-marked adobes, and rectangular mold-made plain adobes are all used. There is a generalized, although not absolute, sequence of adobe types running from tapia, through ball adobes, into cane-marked and then plain bricks. The cane-marked and plain adobes are the rule for Late Gallinazo although ball adobes continue. Middle Gallinazo features cane-marked, ball, and tapia adobe while Early Gallinazo is largely tapia.

There are six Isolated Pyramid Mounds in the Gallinazo Period. In the Huacapongo drainage, two are Middle phase and one Late. All of these three are low (1 meter or less), rectangular platforms, the largest of which is 25 meters square. They are made of earth and small rock. In one, we observed some plain rectangular adobes; in another, there was evidence of retaining walls of stone. A section of a stone foundation on the summit of one of the mounds was the only sign of a building. The Lower Valley mounds are all more impressive than these in size, ranging from 4 to 8 meters in height. The smallest dates from the Early phase. It is 17 by 7 meters at the base, 4 meters high, and has a small rectangular flat-top. Construction is either clay rubble or tapia adobe. The other two Lower Valley mound sites are of the Late phase. One is constructed of plain adobes and one of cane-marked adobes.

The "Pyramid-Dwelling-Construction Complex" is a combination of a Dwelling-Construction Mound and a Pyramid Mound. This combination implies the combined functions of a living site and a community or ceremonial structure. There are 14 such sites which can be so classified for the Gallinazo Period. Two of these probably reach their apogee later, in the Huancaco Period (V–88–89 and V–149); but the others are predominantly Gallinazo. All show Late phase ceramics. In some, such as V–59 and V–152–153, the Late phase material overlies Early and Middle Gallinazo refuse and structures. It may be, however, that the pyramids at these sites date only from the Late phase. Bennett (1950), in his work at V–59, offers evidence to date the great pyramid at that site as Late Gallinazo, alone.

The majority of the Pyramid-Dwelling-Construction Complexes are in Lower Virú, including and surrounding the Gallinazo site proper (V–59). V–59, which is the largest, has a total area of about 400 by 200 meters. This site area is an uneven platformlike mass, ranging in height from 3 to 8 meters. It is dotted with knolls or small hills. Both the platform and the knolls proved, upon excavation, to be a solid agglomeration of conjoined, adobe-walled rooms. Construction is identical to that described for the Dwelling-Construction Mounds. The dwellings were very large Agglutinated Village units, built one upon the other. The great Pyramid, which rises on top of this platform, and may rest upon old house clusters, is 70 by 65 meters at the base and 25 meters high. It was built solidly of cane-marked rectangular adobes bound together with algarroba timbers. Within the site, probably dating from the Middle or Early phases, and preceding the mound, was a large courtyard or room with an adobe mosaic-decorated wall.

The joint site, V–152–153 (see Bennett, 1950, pp. 35–46), is very similar to V–59 but not as large. It is about 1 kilometer distant from the bigger site. Here, the platform is U-shaped and is surmounted by two, rather than one, Pyramid Mounds. This site, too, has a court with a mosaic wall. V–155 and V–156 are similar sites located in the same general area (see Bennett, 1950, pp. 46–49).

At V–165 and V–175 there is less dwelling-construction mass. Both sites are grouped of several small Pyramid Mounds connected with low aprons or platforms. All of V–165 could be contained within a diameter of 90 meters.

V–239 is a group of three large Pyramids, the largest being 32 by 22 meters at the base and 12 meters high. In an area in front of the largest mound, and flanked by low aprons which may be dwelling-construction ridges, old excavations reveal adobe-lined rooms or tombs. The rectangular cane-marked adobe type is found in all of the mounds. V–240 is a large, single adobe Pyramid. It is L-shaped with the highest and second-highest levels on one bar of the L and the lowest level forming the other bar. This is clearly not a Pyramid Mound on top of a Dwelling-Construction Platform. The mound was built as such, much as those of V–239, and a cluster of adobe houses was built afterward against the base of its flank. V–77, in the Middle Valley, is similar except that it is stone-covered. Two apron levels, in descending order, extend out from one side of the great Pyramid which is 73 by 70 meters and 10 meters high. On the opposite side of the main Pyramid is another apron. Along the basal flank of the big mound is a cluster of stone-walled house foundations in an area 85 by 17 meters in extent.

The Pyramid-Dwelling-Construction Complex thus divides into two varieties. One is a Pyramid or Pyramids built as a part of, or upon, platforms which were composed of abandoned houses and served as bases for occupied houses. Such sites were large Agglutinated Village areas. The other variety is the Pyramid around which have been clustered a group of attached dwellings. These dwelling units, also agglutinated in pattern, were relatively small.

The fortified sites of the Gallinazo Period include one Hilltop Redoubt (V–132), which was occupied during the Early phase of the period as a continuity out of Late Puerto Moorin, one Hilltop Platform site (V–138), and five "Castillo Fortification Complexes." The Hilltop Redoubts and Platform types have been reviewed in the Puerto Moorin Period, but the Castillo Fortification Complex is new to the Gallinazo Period. They are largely a feature of the Late phase, although one dates from the Middle phase of the period. Most of them retain the encircling stone-wall concept of the Puerto Moorin Hilltop Redoubt, but the terrain situation is changed. Instead of being situated upon the large, flat tops of big, isolated hills, the castillos are found on steep, jutting spurs or small, steep, rocky hills. Their central feature is a rectangular, terraced adobe Pyramid Mound. This is usually placed on the highest, or one of the highest, points within the encircling rock wall. Additional adobe platforms may also be found within the enclosure. Hillcrest ridges are artificially flattened and prepared with defense walls so that all approaches to the Pyramid and Platforms are securely guarded. Sometimes a large rectangular room or enclosure is a part of the complex. This enclosure, with its high adobe walls, is built next to the Pyramid. There will also be series of smaller rooms, such as at V–51 where they have been placed, contiguously, along a prepared ridge near the Pyramid and within the enclosure.

The Castillo Fortification Complexes are all strongholds and strategically arranged defense positions. The adobe pyramids, built in superimposed terrace fashion much like the pyramids found on flat ground, suggest the idea of a sacred shrine or ceremonial place within the fortified enclosure. Rooms or houses are also included, but the communities are not large. They could not have accommodated the numbers of people that might have taken refuge in the Puerto Moorin Period Hilltop Redoubts.

All of the five castillos were constructed largely of cane-marked, rectangular, and mold-made adobes.

Cemeteries, as open areas devoted to no other uses, are not a common feature of the Gallinazo Period; or, at least, we did not encounter them in our survey. We note only one such site, but there are reports of others in the Valley (see Larco Hoyle, 1945 b). The common locations for burial, especially in the Lower Valley, were in the Earth-Refuse, the Dwelling-Construction, and the Pyramid-Dwelling-Construction Complexes. Bennett (1939, pp. 54 ff.; 1950) found Gallinazo burials of all subperiods in several sites of these types.

EXPOSED DWELLING SITES

Explanatory note.—Under this heading I have included sites of the Gallinazo Period which show evidences of what appear to be dwelling structures that are not immediately attached to mounds, pyramids, or other building complexes. In almost every case the examples are from the middle or upper sections of the Valley where stone foundations for buildings are the rule. I feel quite certain that functionally comparable dwelling sites are represented in the lower Valley by both Dwelling-Construction and small Earth-Refuse Mounds.

There are 11 sites of the "Exposed Dwelling" type. The first seven listed show unmixed Gallinazo Period ceramics of the Late phase; the last four have Late Gallinazo ceramics mixed with those of other periods:

V–34
V–40
V–43
V–63
V–76
V–131
V–219
V–18
V–39
V–51
V–229

V–34, *V–40*, *V–43*.—These three Semi-isolated Large House sites are much the same as to topographic situation and general appearance. V–34 (Quad E–1, southeast), in Huacapongo-North, is one of several dwelling unit ruins on the rocky outwash plain at the foot of the Cerro Niño group. The foundation walls are in a good state of preservation, standing 90 cm. high. The masonry is of the usual double-faced cyclopean type. The unit consists of two fairly large rooms. The larger room is 14.5 by 9.5 meters; and the smaller room, attached to the long side of the other, is 8 by 6.5 meters. Doors or other features were not observed.

V–40 (Quad E–2, northwest) is one of many ruins on the outwash of Queneto quebrada (fig. 22). Today, it consists only of low, smashed stone-wall foundations of the double-faced masonry type. The walls are 60 to 70 cm. wide. Apparently once a group of several houses, only two complete ones are now remaining, as the rest

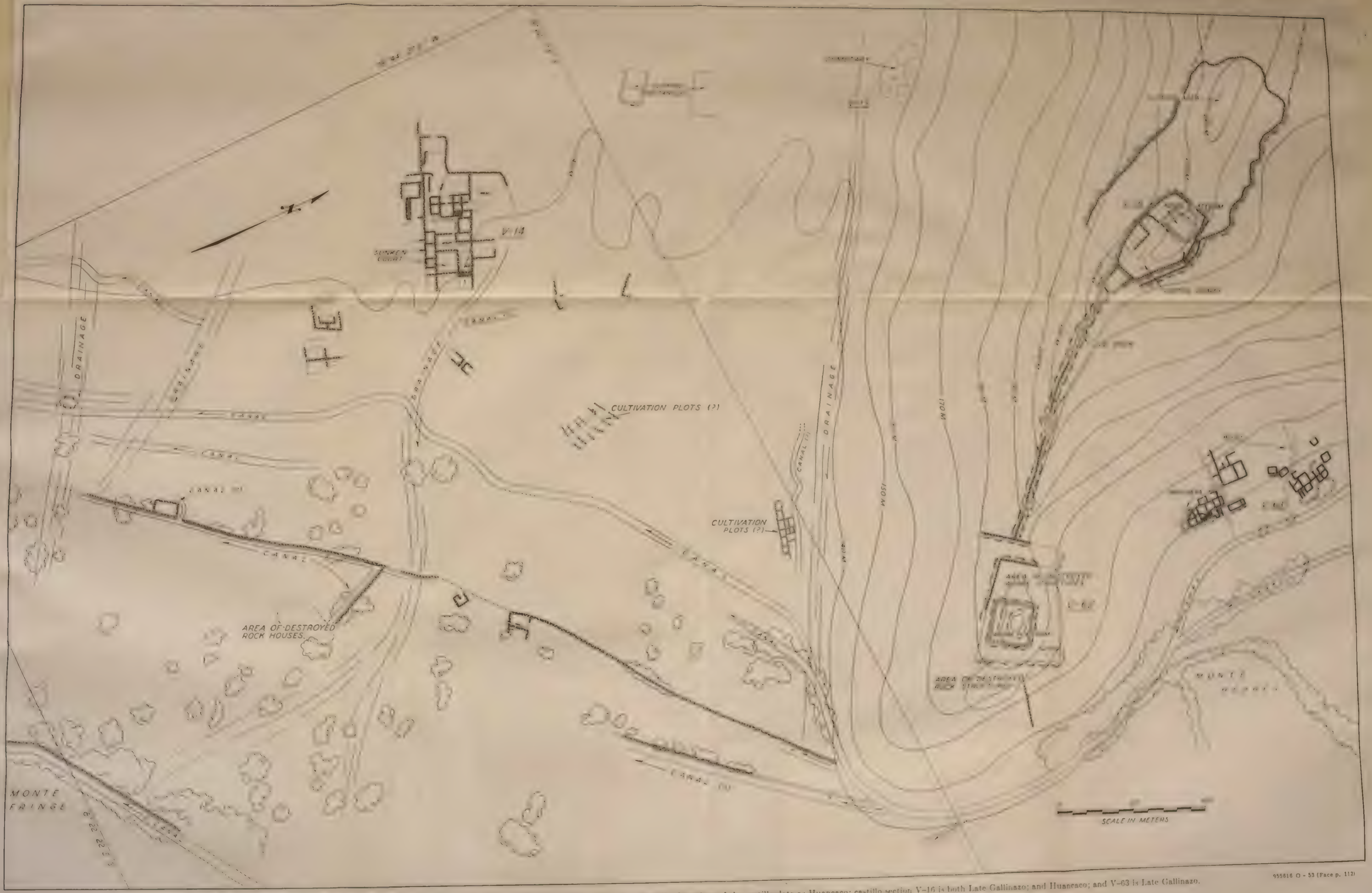
V-14
SUNKEN COURT
DRAINAGE
DRAINAGE
DRAINAGE
DRAINAGE
CANAL
CANAL
CANAL
CANAL
CANAL
CANAL (?)
CANAL (?)
CANAL (?)
CULTIVATION PLOTS (?)
CULTIVATION PLOTS (?)
AREA OF DESTROYED ROCK HOUSES.
110M
100M
V-62
AREA OF DESTROYED ROCK STRUCTURES
MONTE FRINGE
SCALE IN METERS

FIGURE 23.—Ground plan of structures near San Juan spur at mouth of Queneto quebrada. V–14, V–15, and the V–62 sections of the castillo date as Huancaco; castillo section V–16 is both Late Gallinazo; and Huancaco; and V–63 is Late Gallinazo.

have been cut away by floods. The larger house is almost truly rectangular (14 by 11 meters), although there is an inset to one corner which seems to have been made to accommodate an adjoining room, which has since been destroyed. Attached to one wall, adjacent to the doorway, is a small room 2.5 by 2.5 meters. The doorway, which is a little to one side of the center of the long axis of the house, is fitted with large smooth stone slabs on either side. Nearby, the second complete house, also with a prepared doorway, measures about 7 by 7 meters.

V–43 (Quad E–2, northwest), also in Queneto quebrada, is a two-room unit which, from all appearances, is complete in itself and was not part of a larger building complex (fig. 22). The stone-wall foundations are of the usual double-faced type. The best preserved room is 11 by 7.5 meters. Inside, a banquette follows along all four walls. This banquette is 30 to 40 cm. high and 2 meters wide. Retained by the wall on its outer side, its inner side is lined with a single row of large, fitted boulders. The banquette is broken only by the doorway and by a small corner room. The latter is about 2 meters square. The doorway is 60 cm. wide and is fitted with two large stones as jambs. Two very small rooms, each 2 meters square or less, are attached to the outer wall. The faint outlines of a second large room, about the same size as the first, can be seen adjoining another wall.

The unit is situated only a meter or two off the side of a prepared pathway or road of obvious prehistoric origin. This may or may not have significance.

V–63.—This site is located on the lower edges of the hill slopes of the San Juan spur just over the ridge from the mouth of the Queneto quebrada (Quad E–1, southwest). It consists of three groups of rock-walled foundations (fig. 23). The entire site could be encompassed in a radius of about 60 meters. Built on a slope, room arrangements follow a terrace plan with one file of rooms somewhat higher or lower than the file adjoining it. The arrangements of rooms within a group are not symmetrical. Two of the groups contain 15 rooms each. The largest rooms are as much as 7 meters square, although most of them are about 4 or 5 meters. And each group has two or three "closet-sized" small rooms. The banquette feature, along one side of the wall, is noted in two rooms of one group. Besides these two groups, there are a few detached room foundations nearby. The third principal group or unit consists of two large rooms. Broken sections of walls extending out from these two large rooms indicate that the unit was once composed of more rooms, but it is no longer possible to plot these. Together, the two large rooms measure 18 by 10 meters. No evidences of outer doorways were seen, but there is a very definite connecting doorway between the two rooms. The floor area of both of these large rooms was filled with what appeared to be deep refuse, and outside of the building, on the up-slope side, there were more indications of rubbish piles.

V-76 (*Sarraque House Group*).—This site, taking its name from Cerro Sarraque and the castillo and *palacio* type structures in the vicinity, is at the southwest foot of Sarraque spur, 100 meters or so distant from V-75 (Quad E-2, northeast) (fig. 35, p. 176). The stone foundation walls are rather poorly preserved, and it was possible to map but a small section on the lowest terrace level. This group is composed of conjoined rectangular rooms and shows an Irregular Agglutinated layout similar to that of site V-63. Vague outlines of from 6 to 10 rooms remain. Some of these are small, although it appears as though there were two large rooms incorporated within the group. Up the steep hill slope from this lowest terrace group are the battered remains of rock wall foundations of at least 100 rooms. These are arranged terrace fashion and they are conjoined, both on the same terrace and from terrace to terrace.

V-219.—This site is located in Huacapongo-South at the foot of the Cerro Sarraque spur. It is just over the ridge from V-76 (Quad E-2, northeast). Built on a rather steep slope, the site is contained within a rock-walled rectangle 27 by 13 meters. The long axis of the quadrangle is parallel to the slope. The rectangle is imperfect, bulging noticeably on the east side. Within, there are four rather sharp transverse terraces. In some places these terraces are faced with rock walls, and rock walls or partitions, now almost obliterated, can be seen dividing the terraces into rooms. At the lower end of the quadrangle a fragment of a wall extends outward from the northeast corner as though other rooms were once attached. The total effect is that of a planned, or partially planned, Rectangular Enclosure Compound group.

At the lower end of the compound, just outside the wall, are refuse dumps. Some 20 meters further downslope is an old canal running westward around the base of the hill. Ten meters west of the compound are a series of terraces on the hill slope which parallel those in the compound. These are rubbish-covered but show no architectural features whatsoever.

V-131 (*Cerro Sausalito*).—At the foot of a hill adjoining Cerro Sausalito, facing out northwestward toward the Valley, is a small cluster of adobe houses (Quad C-4, southeast). Seven or eight rooms remain. Formerly, there may have been more rooms, although there is no reason to believe that the site was very large. Its construction against the slope of the hill has necessitated some accommodation by way of terracing the room rows. There are four fairly complete rooms each of which measures from 5 by 5 to 5 by 7 meters. There is one adjoining small narrow room, and there are suggestions, in attached wall segments, of three or four more rooms. The walls of the construction are as much as a meter high in some places, although they have, clearly, been broken and eroded away. They vary from 75 to 60 cm. in width, tapering slightly toward the top. Most of the construction units are wedge-shaped adobes, apparently handmade. These were placed point to point in the wall, flat side down, so that the two wall surfaces are formed by the smooth butt-ends of the wedges. Clay rubble fill was used in the interstices. The size variation of the wedge-shaped adobes is considerable: 26 by 25 by 14; 25 by 21 by 9; and 25 by 24 by 12 cm. The walls were covered with a 1-cm. layer of plaster (pl. 20, *center*). A few rectangular adobes were also seen in the walls. One was clearly mold-made and cane-marked. It measured 38 by 25 by 8 cm. Another rectangular adobe was 33 by 28 by 15 cm.

About 30 meters south and slightly east of V–131 proper are more walls of the wedge-shaped adobes (pl. 16, *bottom*). These are almost buried in drift sand. On investigation a single criblike room, 2 by 1.75 meters was uncovered; subsequently, two other rooms of similar size and construction were found attached to the first. The walls of these were over a meter high, having been protected by clean drift sand. All rooms were empty. The wedge-shaped adobes, an unusual form in Virú, links the cribs to V–131.

V–18.—This site is a midden, cemetery, and house site nestling in a small quebrada off the Valley proper just a few hundred meters west of the Castillo de Tomaval (V–51) (Quad E–2, southwest). The principal feature of the site is a rock-walled Compound or Rectangular Enclosure of double-faced type masonry which has been constructed on a platform on a hillside. The rectangle is 18 by 14 meters on the average. It is uniformly 18 meters on the long axis, but on the short axis the opposite ends measure 12 and 14 meters, respectively. The interior is divided into five rooms. One large room is 14 by 8 meters while four smaller rooms quarter the remaining space. Although constructed on a hillside platform, there is still some natural declivity to be overcome, and this has resulted in a series of three terrace levels within the quadrangle. These terraces are accentuated by the transverse walls of the interior partitions.

Down slope from the quadrangle there is an area of deep refuse. A relatively recent ravine has cut through this refuse, revealing it to be as much as 4 meters deep in some places. There are also a number of pot-holes made by *huaqueros* and these show deep refuse, structures, and, possibly, graves. Rooms or tombs are disclosed in these refuse cuts. These structures are constructed of both double-faced cyclopean masonry of stone, much like the nearby quadrangle, and of small rectangular cane-marked adobes chinked with small flat stone spalls. The pattern of arrangement of these structures is not clear from these incidental excavations, but it is certain that they are conjoined rooms.

One large sherd collection from the site dates as Late Gallinazo, and it is likely that this is the period of the stone-walled Compound. A second collection ranges through the Puerto Moorin Period into Early Gallinazo. It is likely that some of the buildings glimpsed in the deep rubbish date from this earlier range.

V–39.—This is a Regular Agglutinated unit of about 20 rooms which appears to have been built according to symmetrical plan (fig. 22). The wall foundations are of doublefaced stone. The site is located on the outwash plain of Queneto quebrada not far from V–40 and V–43 (Quad E–2, northwest). Total size of the building, which seems to be more or less intact as to ground plan, is approximately 28 by 22 meters. There is one large room, 10 by 11 meters, which has a raised and stone-faced banquette on two sides. There are also two small rooms, or room niches, where the floor has been raised and faced with a single row of stones in banquette fashion. The remaining rooms average about 3 by 5 meters in size except for a row of five small cubicles along one side of the building. All of these are slightly less than 3 meters square. There is one even smaller closetlike room in the corner of a larger room. It measures less than 2 meters square.

V–39 dates as both Late Gallinazo and Huancaco. Quite likely it was built during the earlier period and occupied through both.

V–51 (Castillo de Tomaval—dwelling site).—Near the famed Castillo de Tomaval, and included under the same survey number (V–51), is a large Agglutinated Village area of refuse and house structures that, obviously, was a living community (Quad E–2, southwest) (see discussion of "Castillo Fortification Complexes" under this period for a treatment of the Castillo de Tomaval proper, pp. 160–165). The area of this community is 250 meters north-south by 75 meters east-west. It is situated on the brow of a ridge a little to the northwest of the Castillo proper (see fig. 32, p. 160). Within the perimeter of the dwelling site there are surface evidences of rock walls and of adobe walls. Most of these are too badly eroded or destroyed or too deeply buried to map.

It is questionable as to how these structures date. The 1946 excavations made by Strong and Evans[32] within this community area penetrated through 6.75 meters of refuse. At the lowest depths, 5 to 6.75 meters, it was found that the site had been occupied by people of the

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[32] I am indebted to these colleagues for making available to me their field notes on the V–51 excavations.

Puerto Moorin Period. No structural remains associated with this period were disclosed. From depths of 1.25 to 5 meters the refuse was purely of the Gallinazo Period, all phases being represented. At the 1.25 meter point a very few identifiable decorated sherds of the Huancaco Period appeared although the bulk of the rubbish in this top meter-and-a-quarter was still of the Gallinazo Period. Strong and Evans found walls and floors in the Gallinazo levels at depths of 3.75, 2.5 and 1.5 meters below surface. Structural evidences were also encountered at a depth of 50 cm. below surface in what probably was a Huancaco Period occupation.

From what we know of the site in general, I think it probable that most of the dwellings, including those of the uppermost levels, were built by the Gallinazo people even though occupied for a relatively short time during the Huancaco Period. Hence, this part of V–51 is described here under Gallinazo Period dwellings.

Referring again to the stratification which Strong and Evans obtained in the V–51 dwelling site area, we are able to summarize construction types as regards building materials. Site size, layout, etc. cannot, of course, be determined in the confines of a small test pit. Between 3.75 and 2.5 meters below surface in their Cut 1, Strong and Evans report house floors, presumably conjoined rooms of smallish size, and constructions of cane-marked, rectangular adobes. These adobes average 47 by 26 by 18 cm. in size. In their Cut 2, a test made near the southwest corner of the dwelling site area, approximately 100 meters due south of Cut 1, they found corroborative evidence in adobe walls at a depth of 2.75 to 3 meters below surface which were also constructed of cane-marked rectangular adobes (size: 35 by 26 by 13 cm.). Higher up in the refuse, in Cut 1, they found walls of two types between the depths of 1.5 and 2.75 meters below surface. One was of rectangular adobes laid with an interior core of clay rubble within the wall; the other wall had a foundation of uncut stone in mud mortar with small stone spalls, and on this base were laid large rectangular adobes (40 by 30 by 10 cm.) of the cane-marked variety. Walls at the 50 cm. below surface level were also of large cane-marked adobes (45 by 28 by 12 cm.).

On the surface occasional adobes were visible here and there, mostly as a result of *huaquero* activity at the south end of the site. For the most part, however, no adobe walls were traceable. Just east of Strong and Evan's Cut 1 is a house pattern of some eight or nine rooms. These can still be followed as stone foundations of the uncut, cyclopean, double-faced variety. Most of these walls average 70 to 80 cm. in width. It is quite likely that they once sustained adobe superstructures. The entire area of the house unit can be embraced within a diameter of 25 meters. There are two large rooms (fig. 32, p. 160) about 10 by 10 meters apiece. One of these has a small corner room. Additional attached rooms vary from 2.5 by 2.5 to 7 by 4.5 meters. There is a general plan of arrangement, and the rooms are well squared. The unit is too small, however, to be able to say anything of the over-all site plan, if such existed.

It is obvious that the small cluster of rooms which we have mapped and described is but a tiny fraction of the dwellings that once existed in the dwelling area of V–51. Not only was the site extensive, but the recent excavations show that it was also of long duration. It was undoubtedly one of the most important population centers of the Gallinazo peoples in the middle or upper Valley.

V–229.—Site V–229 is situated on the rocky floodplain of a quebrada in Huacapongo-North (Quad F–2, northwest). This site, somewhat cut up by past floods, consists of the stone-wall foundations of an Irregular Agglutinated Village (fig. 24). The rooms were arranged, without symmetry, in clusters. One such cluster probably comprised nine rooms. Rooms are rectangular, of varying sizes, and well squared. In one unit of five or six rooms there are two raised banquettes.

Both Early Puerto Moorin and Late Gallinazo pottery components were found in this site; but I am inclined to believe that most of the structures belong to the later period.

The site is divided by an irrigation canal, either the channel of the principal canal in Huacapongo-North or a subsidiary of the main line. It is impossible to tell, however, if the canal cut through existing buildings.

Additional occupation sites.—There are 14 sites at which Gallinazo Period ceramic refuse was recorded but at which no architectural remains could be associated with these ceramics. These are:

V–13
V–20
V–38
V–114
V–117
V–121
V–136
V–160
V–171
V–266
V–278
V–281
V–284
V–311

Most of these are open midden refuse sites which date solely from the Gallinazo Period. Sites V–114 (Quad C–5, northwest), V–117 (Quad C–6, southeast), and V–121 (Quad B–5, southeast) are such sites of the Late Gallinazo phase. They range from 100 to 200 meters in diameter; are marked with broken shell and ceramic refuse; and appear to be of superficial depth. V–114 is about 4 kilometers inland from the sea in Lower Virú-South, situated in open sandy flats. V–117 and V–121 are less than a kilometer from the beach in the same part of the Valley. All three sites lie along the margin of what was formerly the cultivation line; V–114 may have been within it; V–117 and V–121 were probably just out of it.

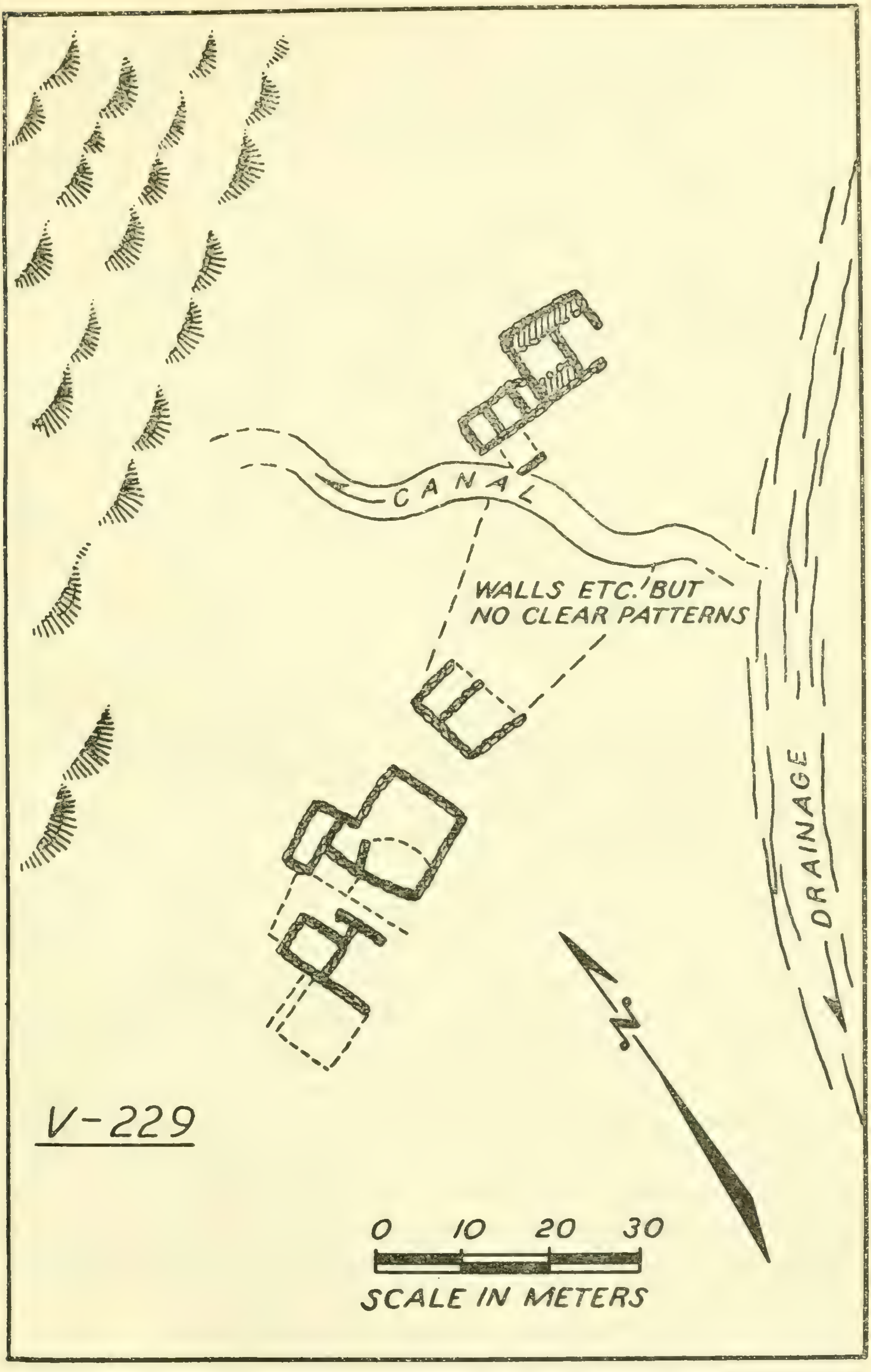
CANAL
WALLS ETC. BUT NO CLEAR PATTERNS
DRAINAGE
N
V-229
0 10 20 30
SCALE IN METERS

FIGURE 24.—Ground plan of V-229. Early Puerto Moorin and Late Gallinazo ceramic components found on site. Structures probably refer to later occupation.

The sites V–266 (Quad B–4, southwest), V–281 (Quad B–3, northwest), and V–284 (Quad B–4, northwest) are similar open shell middens lying in the sandy dune country back from the beach and along the margin of what was once cultivated territory. All three are in Lower Virú-North. Site V–266 is Middle Gallinazo; the others are of the Late phase.

Midden sites V–136 (Quad C–4, southwest), V–171 (Quad C–4, northeast), and V–311 (D–3, southwest) are all inland and fairly near the center of the valley on its south side. V–136 is on the relatively steep sandy slope of Cerro del Piño. It is an area of some 100 by 75 meters. Burials may have been made in this area, but the refuse deposit does not appear to be deep. V–171 is a buried Gallinazo Period refuse layer. It is both underlaid and overlaid by detritus of other cultural periods. V–311 is a refuse layer deeply buried by river silts. Bird, who examined V–311, reports that Gallinazo Period sherds came from a depth of about 10 feet beneath the present Valley floor. Site V–136 is of the Late Gallinazo phase while V–171 and V–311 are unplaced as to phase.

V–160 (Quad B–4, northwest) is a midden site of the Gallinazo Period (unplaced as to phase) in which numerous burials had been excavated at some time in the past. It is situated along the northwestern margin of ancient cultivation in what is now dune country. The V–160 occupation and cemetery is on small sand hills overlooking a large irrigated field (prehistoric). The field is enclosed on two sides by a wall made of mold-made rectangular adobes. There are depressions on each side of the field that appear to be ancient.

The remaining sites showing Gallinazo surface pottery have multiple periods of occupation. V–13 (Quad D–2, southeast) is a midden, cemetery, and house-structure area in which several periods are represented. The rock-walled structures are badly preserved and cannot safely be attributed to any particular period. V–20 is a large rock-walled quadrangle in Huacapongo-North (Quad E–1, southeast). The pottery collection ranges through three periods, and it seems unlikely that the structure dates as Gallinazo. Site V–38 is actually a portion of the big Huancaco Castillo, being a midden area situated just off the northwest corner of the main buildings. It dates as pure Late Gallinazo in itself, but other sections of the Huancaco Castillo site (V–88–89) show a mixed Gallinazo-Huancaco dating.

DWELLING-CONSTRUCTION MOUNDS

Explanatory note.—This is the term coined for those mounds in Virú which are, or appear to be, the result of architectural accretion.

Most of them are in the lower valley and consist largely of adobe. That mounds of this type could be differentiated in their construction and origin from simple earth-refuse mounds or from pyramid mounds of adobe results from the recent work of Bennett (1950) in the Gallinazo site group. Bennett found that many of the mounds of Lower Virú-North which appeared to be earth-refuse piles or adobe pyramid mounds were actually built up as superimposed construction levels of adobe walls and clay floors. Virtually all the mounds of this type which he excavated were found to be wholly artificial and to contain room-type structures down to their interior core. Gallinazo Period builders in the lower valley seem to have followed the practice of building many of the living sites directly upon structures which had been abandoned. This was done by filling up old rooms with earth, sand, or clay rubble and constructing new walls and floors on the debris of the old.

The function of what we have called "Dwelling-Construction Mounds" was, then, clearly the same as that of house groups or dwelling units. Their physical similarity to Pyramid Mounds is accidental. It is, of course, possible, and in one or two instances seems to be demonstrated, that a block of superimposed adobe house structures served as the nucleus or the base for a true adobe pyramid. The fact that true adobe pyramids and Dwelling-Construction Mounds are found together in the same site complex (we have referred to these as "Pyramid-Dwelling-Construction Complexes") indicates that one type of construction tended to merge with the other. Nevertheless, the essential function and purpose of the Dwelling-Construction Mound as opposed to the Pyramid Mound are distinct, and I have tried to emphasize this distinction by discussing them separately.

Obviously, the construction history of a mound and its function cannot always be determined from a surface examination. In some cases we may be wrong in our interpretation. We have, however, been guided in these interpretations by the excavations which Bennett (1950) has made in mounds of the types discussed, and in the following descriptions we are indebted to Bennett for the use of his field notes and manuscript material as these pertain to certain sites.

There are 23 Dwelling-Construction Mounds of the Gallinazo Period, most of them dating from the Late phase but some showing Middle and Early phase materials. All are in the lower or lower middle Valley. There is no doubt but what all of these mounds were constructed totally, or at least in part, during the Gallinazo occupation of the Valley. Some sites reveal later occupation, burials, or possibly constructions, but all of these are superficial.

The sites are:

V–151
V–154
V–158
V–161
V–162
V–163
V–235
V–238
V–250
V–252
V–257
V–258
V–259
V–263
V–265
V–270
V–273
V–274
V–277
V–294
V–296
V–303
V–310

V–151.—V–151 is in Lower Virú-North and is one of many mound sites, including Dwelling-Construction Mounds, Pyramid-Dwelling-Construction Complexes, and Earth-Refuse Mounds, which Bennett has referred to collectively as the "Gallinazo Group" (Bennett, 1950, p. 53). Today, V–151 lies in the outer fringe of the *monte* or scrub growth (Quad B–4, southwest). Its appearance is that of a more or less flat-topped sand dune. Upon closer examination, however, it can be seen that adobe constructions form much of the mound. In outline it is vaguely L-shaped, with a projection or arm at one end. Its over-all length (east-west) is 110 meters, and its average width (north-south) is about 60 meters. Height varies from 5 to almost 7 meters above the surrounding flats, although the tip of the western end has a lower section which is only 1.75 meters high. The surface of the mound is rough, and its irregularities or bumps are old house foundations. Grave excavations have been made in the mound in the past, but there is no information as to what was found.

Bennett excavated a small area in V–151, clearing the walls of a room which began almost on the surface of the mound. These walls, constructed of cane-marked rectangular adobes, formed a room 3.3 by 1.75 meters. He noted no doorway.

The sherd collection from the room dates it as Middle or Late Gallinazo (Bennett, 1950, p. 53).

V 154.—V–154 lies a little north of V–151 (Quad B–4, northwest) and resembles it in appearance although it is smaller in extent. It is also in the *monte* zone of Lower Virú-North. The mound is of irregular shape, being roughly trianguloid with maximum axial measurements of 60 meters in each direction, and about 3 meters in height.

Bennett's excavations (Bennett, 1950) revealed walls of rectangular cane-marked adobes beginning at a depth of 70 cm. below surface. A room 2.5 meters square was cleared, and below this construction level other rooms of a similar adobe type were discovered. The lower level rooms, whose walls and fill formed the foundation for those of the upper level, had a different orientation than those above.

In another part of the mound Bennett uncovered a series of burials in clay fill. As the pottery from these burials appears to be a little earlier than the pottery debris from the excavated rooms it may be that the V–154 mound was originally started as an Earth-Refuse Mound and utilized as a burial place. Later, adobe constructions were built adjoining it or upon parts of it.

Bennett (1950, p. 54) dates the room structures as Middle Gallinazo, and the burials as probably Early Gallinazo. It should also be mentioned that the mound was used as a living site for later Tomaval Period people, and their occupation is represented by a few centimeters of superficial refuse.

V–158.—This site, lying out on the northwest edge of the Gallinazo Group (Quad B–4, northwest), in desert and spotted *monte* vegetation, is a small sand-covered mound. Old grave excavations here were successful. Adobe construction is visible and probably forms the core of the mound.

A surface collection from here is dated as Gallinazo Period, unplaced as to phase.

V–161.—This mound lies out toward the westward edge of the Gallinazo site group at the beginning of the rolling dune country which starts just outside the *monte* zone and continues for several kilometers toward the beach (Quad B–4, northwest). In Bennett's (1950, p. 56) opinion it was very similar in constructional history to V–158. Apparently a small sand-covered hillock, it disclosed, upon more detailed examination, adobe constructions. Bennett also mentions a single cut stone. Grave lootings in the past had been successful here.

A collection of refuse sherds from the mound surface and of pottery fragments from graves places the mound as Gallinazo Period but not as to subperiod or phase.

V–162 (*Huaca de la Cruz*).—This well-known site has long been the target of commercial diggers and looters as its cemeteries are common knowledge in the Valley. It is an oval-shaped mound in Middle Virú-South, within sight of the Pan-American highway (Quad D–3, southwest). The total mound is 420 meters long (northeast-southwest) and 260 meters wide (northwest-southeast). Its maximum height is slightly over 15 meters above the surrounding cultivated fields. Bennett, who excavated at Huaca de la Cruz in 1936, describes the site as follows (Bennett, 1939, p. 29):

> The mound has three principal sections. The highest part is a long, irregular oval area, slightly under 150 meters long and from 25 to 50 meters wide, which runs from northwest to southeast. The northern end . . . is the highest part, about 15.75 meters above the general ground level. The southern end is slightly lower and has some irregular constructions of adobes still visible. Below this top area is a second level which extends almost 100 meters to the west and is generally about four meters lower. To the east, a similar extension forms a saddle bridge to a small knoll. Surrounding the mound is a sandy slope

> stretching out from 50 to 100 meters in all directions and marking the outermost extension of the mound.
>
> The top part has been little excavated and the pits that have been made have been profitless. The middle platform has been extensively pitted disclosing many walls of dwelling sites and numerous graves. Old pits testify that the sandy slope around the mound once contained graves, but little is left to determine their nature or contents.
>
> Roughly one-half of the middle platform on the west has been badly burned . . . to a depth of two meters in places and the burials in that section are likewise burned to a crisp. A thick cap of the mound consists of such dwelling site refuse as straw, llama dung, and other combustible materials. The fire was possibly the result of burning brush for charcoal. . . . It is clear that the burning is post-burial as the lines of intrusion of the burials are distinct, ...

Bennett (1939, p. 33) was of the opinion that the mound was only partly artificial. He noted its similarity of size and location to the nearby mounds of Taitacantin and Huaca Larga which are indisputably sand dunes. However, he also observed that the top three or four meters of Huaca de la Cruz were an artificial accumulation of adobe-walled structures and detritus. Superimposed construction walls were uncovered in his excavation at the site.

Although Bennett was of the opinion that the structures and living refuse at Huaca de la Cruz were attributable to the Mochica (Huancaco Period) occupation of the Valley, the more recent work of Strong and Evans has demostrated the lower constructional and refuse levels of the site to belong to the Gallinazo Period. I am indebted to these colleagues for their summary of the situation (personal communication, 1946). In two cuts they found occupational evidences down to depths of 3.1 and 4.5 meters below surface. These excavations clearly revealed Gallinazo Period materials in the lower half of the debris, and these were overlaid by Huancaco sherd refuse. House constructions made of rectangular cane-marked adobes (measuring 28 by 16 by 10 cm.) characterized the Gallinazo Period levels. In one instance, Strong and Evans found that the later Huancaco peoples had utilized an old Gallinazo Period adobe room as a part of an elaborate tomb for one of their dignitaries. They had rebuilt it in part with plain rather than cane-marked adobes.

Strong and Evans date the Gallinazo occupation of V–162 as running through Early, Middle, and Late phases. Huancaco reoccupation has been mentioned. Still later, the mound was used again as a cemetery during the Tomaval and La Plata Periods (Bennett, 1939, pp. 39 ff. and p. 50).

V–163.—This site consists of two mounds. One was excavated by Bennett in 1936 (Bennett, 1939, pp. 58–59) and given the designation "Ca-10c." The other is referred to by Bennett (1950) as V–163. The mounds are located in the midst of the Gallinazo Group (Quad B–4, northwest). Bennett (1950, pp. 56–57) describes the "Ca-10c" mound as being 18 by 13 meters and 1.5 meters high; the other mound measured 30 by 12 meters and is the same height as the first.

On the basis of Bennett's excavations, plus some testing in the second of the two mounds in 1946 by Strong and Evans, we know that both contained burials in simple pit graves, that both were constructed largely of hard packed clay, and, also, that both mounds show old internal wall constructions of ball-type adobes. From these descriptions the mounds appear to be combinations of the Earth-Refuse type of site and the Dwelling-Construction Mounds.

On the basis of the grave collections, both mounds date as Late Gallinazo. On the other hand, the ball adobe constructions within the mounds imply a Middle Gallinazo Period. Possibly the burials are later intrusions.

V–235 (*Taitacantin*).—This is one of the largest dune hills in the central part of the Valley. It is surrounded by cultivated fields and much of it is covered with ancient cultural detritus. As a dune it has, obviously, been stabilized for many centuries. Situated in Middle Virú-South, the southwestern tip of Taitacantin hill extends across the route of the Pan-American highway (Quad D–3, southwest and D–4, northwest). A long, ovate-shaped hill, pointed at both ends, it is almost 900 meters long and is 330 meters wide at one point. Somewhat lower than V–162, which is nearby, it is only 4 or 5 meters above the surrounding field and supports scattered algarroba trees. Both Bennett and Olson excavated at this site in the 1930's (Bennett, 1939, pp. 51–53).

On the highest point of the site there is an occupation area about 100 by 40 meters in extent. There are evidences of grave digging on other parts of the hill, but our examination and collection was confined to the uppermost knoll. On this summit occupation area were sherds, pulverized shell, and other evidences of debris. Rectangular adobes, one of them cane-marked, were scattered about the surface where they had been thrown from old excavations. Probably, a Dwelling-Construction Mound had been built on the top of Taitacantin hill.

A large sherd collection dates as Early Gallinazo. Olson found Tomaval Period graves at the site, presumably from another area on the hill, and Bennett collected Tomaval sherds from the surface somewhere on the site (Bennett, 1939, pp. 51–53).

V–238 (*Huaca Larga*).—Huaca Larga (Quad D–4) is the largest of the old dune hills in Virú. Of similar form and origin to Taitacantin (V–235) and Huaca de la Cruz (V–162), it is situated about a kilometer to the south of these. The hill itself is two kilometers long and averages from 200 to 300 meters in width. Not all of the area of the hill shows prehistoric occupation, and in many places the surface appears as the natural sandy soil of a stabilized dune. But in many places sherds and midden do appear. In an area on the east side of the hill, near the center, there are literally hundreds of old grave excavations. Quite possibly this is the section from which Kroeber (1930, pp. 79–80) obtained a collection of grave scraps which, apparently, date in the Tomaval Period. Incidentally, Kroeber refers to the site as "Taitacantin," but the location is one usually called "Huaca Larga."

The collection which Ford and I made came from a radius of 100 meters of the highest point on the hill. This is slightly north of the center of the total dune mass. At this point there is a vague outline of a rectangular platform, probably constructed of adobes. It is approximately 100 by 200 meters. Adobes of the rectangular, mold-made, cane-marked type are scattered over the surface of this platform. I measured adobes here as 35 by 26 by 12 cm. and 31 by 27 by 13 cm. It is possible that this is a Pyramid Mound, rather than a Dwelling-Construction Mound, but excavation is needed to clarify the question. As the mound is not particularly high and steep, and as living refuse is abundant on all parts, it was classified with the latter.

The collection from the platform area dates securely as Late Gallinazo.

V–250.—This is a small mound, one of a group, in the fields near Santa Elena hacienda (Quad C–3, southwest) (pl. 17, *second row, left*). It is ovate-rectangular in outline, measuring approximately 60 by 30 meters at the base. The mound is fairly steep and stands 3.5 meters high. Possibly it, too, was a Pyramid Mound, but grave excavations in its summit and sides show adobe walls extending down into the mound for a depth of 1 meter or more. No room patterns were discerned, but the evidence in view suggests the superimposed, concentrated dwelling-construction type of mound. Adobes in the construction were rectangular, mold-made, and plain.

The surface collection has two components. One is Gallinazo Middle and Late; the other is Huancaco. The mound was probably built in Gallinazo times and re-used for a dwelling site, cemetery, or both by Huancaco Period people.

V–252.—This is a small, steep mound of the Gallinazo Group (Quad B–4, southwest). It is oriented with the long axis on a north-south line and measures 22.8 by 16.5 meters. Its outline is oval. Height is 3.2 meters.

Bennett, Collier, and I all excavated sections of the mound and all found graves with grave ceramics plus a small amount of habitation refuse. Sections of ball adobe walls were found on both east-west and north-south axes. A floor level in connection with a wall was uncovered about 2 meters below the surface of the central part of the mound.

Under this floor was another at an additional depth of 75 cm. The mound fill was extremely dry, being largely dust, sand, or dry, crumbly clay. Burials were found only above the upper floor level as near as could be determined. There seems little doubt that the mound was a dwelling-construction unit in which earlier rooms had been filled with sand or earth and later rooms constructed above these. The burials were probably placed in the mound after its discontinuance as a dwelling place.

Bennett (1950, pp. 60–61) has dated the grave collections as Late Gallinazo, and has suggested that the buildings in the mound were Early or Middle Gallinazo.

V–257.—Mound V–257 (Quad B–4, southwest) is located toward the southern edge of the Gallinazo Group. It has a platformlike appearance (pl. 17, *top*, *left*); the main body of the mound measures 39 meters north-south and 49 meters east-west; and is 3.5 meters high. Of a general ovate-rectangular form, there is a bulbate extension, 16 meters in diameter, on the northeast side. This extension is at a lower level than the mound platform proper, being only 2 meters high.

On the surface of the main platform Bennett (1950) observed the outlines of numerous conjoined or honeycomb arranged rooms. The adobe walls to these rooms were 30 cm. wide, and the rooms themselves range from 1.15 by 2 meters to 1.25 by 1.25 meters. Bennett's (1950, pp. 55–56, figs. 13, 14) excavations at the west end of the main platform cleared a number of superimposed rooms. In some cases, walls built in an earlier period were continued in use by constructing successive floor levels within a room. Such floor levels were separated from one another by sand fill. A construction sequence of four building periods was recorded in these excavations. The earliest walls were made of tapia; the next of ball adobes; the next of cane-marked rectangular adobes; and the latest of plain rectangular adobes. The excavations did not penetrate to the bottom of artificial construction.

The probable dates given by Bennett are Early and Middle Gallinazo although he advances this with the caution that the ceramic refuse evidence is not clear.

V–258.—The site is on the southern outskirts of the Gallinazo Group and lies about one kilometer west-northwest of the main buildings of Carmelo Hacienda (Quad B–4, southwest). V–258 is one of a group of three mounds. It is 68 by 28 meters with the longer dimension on the north-south axis. At the central crest it stands about 4 meters above the surrounding fields.

The composition of the mound is difficult to determine. The surface seems to be covered with deep sand, and there is evidence of successful grave digging in the past. There are, however, a number of rectangular mold-made plain adobes exposed at several places on the surface of the site; hence, I have classed it with the Dwelling-Construction Mounds.

About 75 meters east of V–258 is a similar mound which may have been a small sand dune on which adobe constructions had been added. Looted graves and plain adobes were also scattered over the surface of this mound. A third mound, apparently similar in type, lies about 100 meters south of V–258. Pottery, textile fragments, and pieces of calabashes were littered about opened graves at this location.

Bennett and I visited all three mounds in 1946 but collected only from the first. Ford has classified the bulk of the sherd collection from V–258 as Late Gallinazo. He also noted Huancaco, Tomaval, and La Plata Period sherds. These last three periods are undoubtedly represented by the fragments from the looted graves.

Although Bennett does not refer to V–258 in his recent report on Virú (1950), he described a test excavation and a surface collection from one of the three mounds in his earlier work (1939, pp. 76–77, *see* "Carmelo 5"). The ceramic material which he found at that time would seem to fit into the Huancaco-Tomaval-La Plata series.

V–259.—This is another mound, presumably composed in part of adobe platforms and old constructions. Its exterior is covered with sand, shell, and habitation refuse. It is located to the southeast of V–258 and west-southwest of Carmelo Hacienda (Quad B–5, northwest). Bennett visited the mound in 1936 (Bennett, 1939, p. 76). At that time he listed it as "Ca–4." He reported remains of adobe walls of plain rectangular adobes and previously excavated burials. Bennett and I revisited the site in 1946, but we did not see any evidences of adobe constructions at that time; however, the very definite platform shape of the mound, measuring 87 by 36 meters and standing some 3.5 meters high, led us to believe that it was of dwelling-construction origin.

Bennett classifies the 1946 collection as Late Gallinazo with later materials (Bennett, 1950, p. 56). Apparently, the mound had been used for Huancaco and Tomaval occupation, burials, or both.

V–263.—Mound site V–263 lies a short distance northeast of V–151 (Quad B–4, southwest). It is platformlike in appearance. Measuring 42 by 26 meters, it stands over 3 meters above the plain. It is sandy in appearance and covered with pottery and shell debris. Rectangular adobes are visible on the surface.

Bennett and I visited the site in 1946, and a collection made by him dates as probable Late Gallinazo.

V–265.—Is a long oval mound, 35 by 16 meters and about 1.5 meters high except for a slightly higher knoll at the south end. The orientation of the mound is north-south on the long axis. It is situated along the western edge of the Gallinazo Group (Quad B–4, northwest).

When Bennett and I visited the site in 1946 the wall outlines of several rectangular, conjoined rooms were exposed in old grave excavations. The walls are constructed of tapia adobe. Rooms varied in size from 2 by 3 meters to about 4 by 3 meters. Bennett (1950) made a test excavation at the south end of the mound, following tapia adobe walls down to a depth of 1.6 meters below surface. From this exploration it is obvious that at least a part of the mound resulted from adobe buildings which had originally been built on or only slightly above the natural Valley floor.

Bennett's sherd collections from the structures are placed as Early Gallinazo, and this fits with the tapia-type constructions. On the other hand, some grave pottery which he excavated at the northwest corner of the mound is placed as Late Gallinazo. Presumably the dwellings were built and occupied during the Early phase, and later burials were made in the Dwelling-Construction Mound. The surface collection which I made at the site, and which Ford dated, is largely Late Gallinazo except for a few Puerto Moorin Period sherds.

V–270.—This mound is in Lower Virú-South not far from the river (Quad C–4, northeast). It is in the border of the *monte* growth on the edge of an old natural terrace overlooking the Valley.

Its artificial construction is evident. Oval in shape, it measures about 25 by 15 meters and the summit is 2.5 meters high. Near the top are numerous outcrops of what appears to be tapia or ball adobes. It is either an isolated Pyramid Mound or a Dwelling-Construction Mound. I have, somewhat arbitrarily, grouped it with the latter class.

Potsherds were most numerous around the edges of mound base. A large collection dates as Middle Gallinazo.

V–273.—This site is in Lower Virú-North in cultivated fields a little less than one kilometer from the river (Quad C–4, northwest). It is composed of a group of mounds which are linked together to form a more or less rectangular court. There are from six to eight mounds, the highest of which are about 3 meters. The total aggregate covers an area some 225 by 100 meters.

There is no conclusive structural evidence to be seen on the surface of these mounds or in any of the old pits which have been dug into their sides. In one of the mounds a meter deep pit, probably grave exploration digging, shows tough clay fill or tapia which contains ash and sherds; but aside from this it is the arrangement of the mound group which suggests that it was a dwelling site complex. It is tentatively classified as a Dwelling-Construction Mound cluster.

A surface collection of 103 sherds dates as Late Gallinazo.

V–274.—This mound is in the cultivated fields about 800 meters west-southwest of V–273 (Quad C–4, northwest). Actually, the site is two mounds rather than a single mound. They are separated by a narrow ravine at the bottom of which the mounds touch. The smaller mound is 40 by 30 meters and 3.1 meters high; the larger is 75 by 50 meters but only 1.5 meters high. A small hole in the top of the larger mound revealed clay fill and, possibly, rectangular adobes.

The construction of this mound is in doubt, but it is tentatively classed as a Dwelling-Construction rather than an Earth-Refuse Mound.

A surface collection from here dates as Middle Gallinazo.

V–277.—Mound V–277 is in lower Virú-North about a half kilometer from the river bank (Quad B–4, southeast). More or less round in outline, it has a diameter of about 25 meters and a maximum height of 3 meters. It is much dug over. In one old excavation I observed an adobe wall section of either the tapia or ball adobe type. The modern dirt road leading from Santa Elena to Carmelo clips the toe of the mound. In this road-bank cut, tapia or rubble-like clay fill and potsherds could be seen down to the present ground level. I pried two lump adobes out of this profile, and they were hand-made and odontiform.

A collection of 171 sherds from the mound dates as Middle Gallinazo.

V–294.—This mound is about 300 meters north of the Carmelo Hacienda buildings on the Carmelo-Purpur road (Quad B–4, southeast). It is a rambling, complex structure on the order of some of those in the Gallinazo Group. The main part of the mound is 4 meters above the fields and about 20 meters square. There is a lower level or apron attached to this main platform which is about 18 meters wide and 25 meters long. The apron is about 2.25 meters high.

In an old summit excavation I observed clay fill which may have been either dried rubblelike clay or tapia. At 20 cm. below the surface of the summit there was a single layer of rectangular adobes. One of these which I extracted measured 38 by 25 by 10 cm. It was plain.

A large collection from this site dates as Late Gallinazo.

V–296.—This is a large, sprawling mound with a high central platform and apronlike extensions at lower levels. Possibly, it could be classed as a Pyramid-Dwelling-Construction Complex, although we cannot tell enough about the nature of the central platform to be sure. Maximum height is 5.1 meters above the fields, and the total extent is about 175 by 100 meters. In Lower Virú-North, it is located about one kilometer north of Carmelo Hacienda (Quad B–4, southeast).

A double layer of adobes, apparently forming a floor, covered the upper or central platform. These were cane-marked and measured 36 by 28 by 12 cm.

A collection of over 500 sherds from this site dates as Late Gallinazo.

V–303.—In the Gallinazo Group (Quad B–4, northwest), this mound is one of the two small mounds near Bennett's (1939, pp. 22 and 54 ff.) "Ca–10c" (V–152). The other is V–163 (see pp. 124–125). The mound is 4.75 meters high and measures 80 by 60 meters with the long axis oriented north-south.

Donald Collier excavated here in 1946, and I am informed by him (personal communication, 1946) that there are tapia wall constructions within the mound. Collier also found four burials on the east side of the mound.

Collier has given a preliminary dating of Gallinazo (unplaced as to phase). The tapia walls suggest the Early Gallinazo phase of construction.

V–310.—This is a large mound in Lower Virú-South (Quad C–4, northeast) which was visited and excavated by Collier. I am indebted to him for preliminary information on its nature and dating (personal communication, 1946).

The total site measures 150 by 80 meters and 4.25 meters high. A number of rectangular plain adobes (34 by 25 by 13 cm.) were found on the surface and in old excavations. After attempting stratigraphic excavation Collier finally gave it up as a bad job as the mound had been riddled by looters to such an extent that superposition was not considered reliable.

Concerning the dating he (Collier) states: "Observations led me to believe that the mound was of Gallinazo and/or Mochica date with a large number of Tomaval burials." The Gallinazo dating is unplaced as to phase.

PYRAMID-DWELLING-CONSTRUCTION COMPLEXES

Explanatory note.—This classification applies to those complexes of dwellings and other buildings in immediate association with platforms or pyramids. It is presumed that such sites functioned both as places for living and as ceremonial precincts. Some of the rooms or buildings in such complexes may have been palaces, governmental buildings, or religious quarters. It is almost certain that the associated pyramids of adobe were built for special religious or political purposes. In most cases particularly of the Gallinazo Period, the pyramids were built either attached to dwelling units or upon platforms which consisted of old dwellings or other compartments that had been filled in to serve as substructures.

Among the sites listed below some are definitely dwelling and pyramid complexes. For others the evidence for purposefully constructed pyramids is less conclusive. It is possible that some of these last are no more than dwelling-construction type mound sites.

The sites are:

V–59
V–77
V–88–89
V–149
V–152
V–153
V–155
V–156
V–157
V–165
V–175
V–239
V–240
V–279

V–59 (*Huaca Gallinazo*).—This is one of the largest and best-known sites in Virú. Kroeber (1930, p. 77), Bennett (1939, pp. 54 ff.), and Larco Hoyle (1938–39, vol. 1, p. 62; 1945 b, p. 3) have all described or given mention to the Huaca Gallinazo. In his recent report on Virú Valley excavations Bennett (1950, pp. 25–35) has treated V–59 in considerable detail. The present account is a synopsis of Bennett's findings plus a few additional observations of my own. Strong and Evans' 1946 stratitests are also summarized in the dating of the site.

V–59 is an artificial, adobe-constructed complex of mounds rising above the flat lands of the sparse vegetation belt in Lower Virú-North (Quad B–4, northwest) (pl. 19, *top*, *center*). In 1946 it was over a kilometer from cultivated lands, but in aboriginal times it apparently stood on the edge of cultivation plots as there are evidences of ancient irrigation systems on the west side of the site (pl. 54, *center*). Bennett (1950) describes the over-all size of V–59 as 400 meters north-south and 200 meters east-west. The outline of the site is irregular and there was, apparently, no systematic layout of the various construction elements (see map, fig. 25). The site rises above the flats from a minimum of 3 to a maximum of 25 meters. The central pyramid attains the maximum height (pl. 19, *bottom*). There are also 10 knolls or small mounds, rising above the general platform of the site, which are over 10 meters high. The general platform, itself, ranging from 3 to 8 meters high is almost certainly made up of abandoned and filled structures. Probably, several structural layers are represented. Bennett has noted that at certain hours of the day, depending on the light, a network of house or room outlines can be seen at several places on the platform surface. Test pitting also showed that room constructions continued down to the approximate level of the surrounding flats.

FIGURE 25.—Ground plan of Gallinazo site (V–59). This complex of platforms, superimposed mounds, houses, and burials is constructed of adobe and earth. Subsequent erosion has given it appearance of rounded clay hills. Numerals on mounds and platforms indicate height in meters above surrounding flats. Dates primarily from the Gallinazo Period (all phases), but Puerto Moorin refuse was found in deep cuts. (Redrawn from Bennett 1946 field drawing with certain features added through courtesy of Strong and Evans. See also Bennett, 1950.)

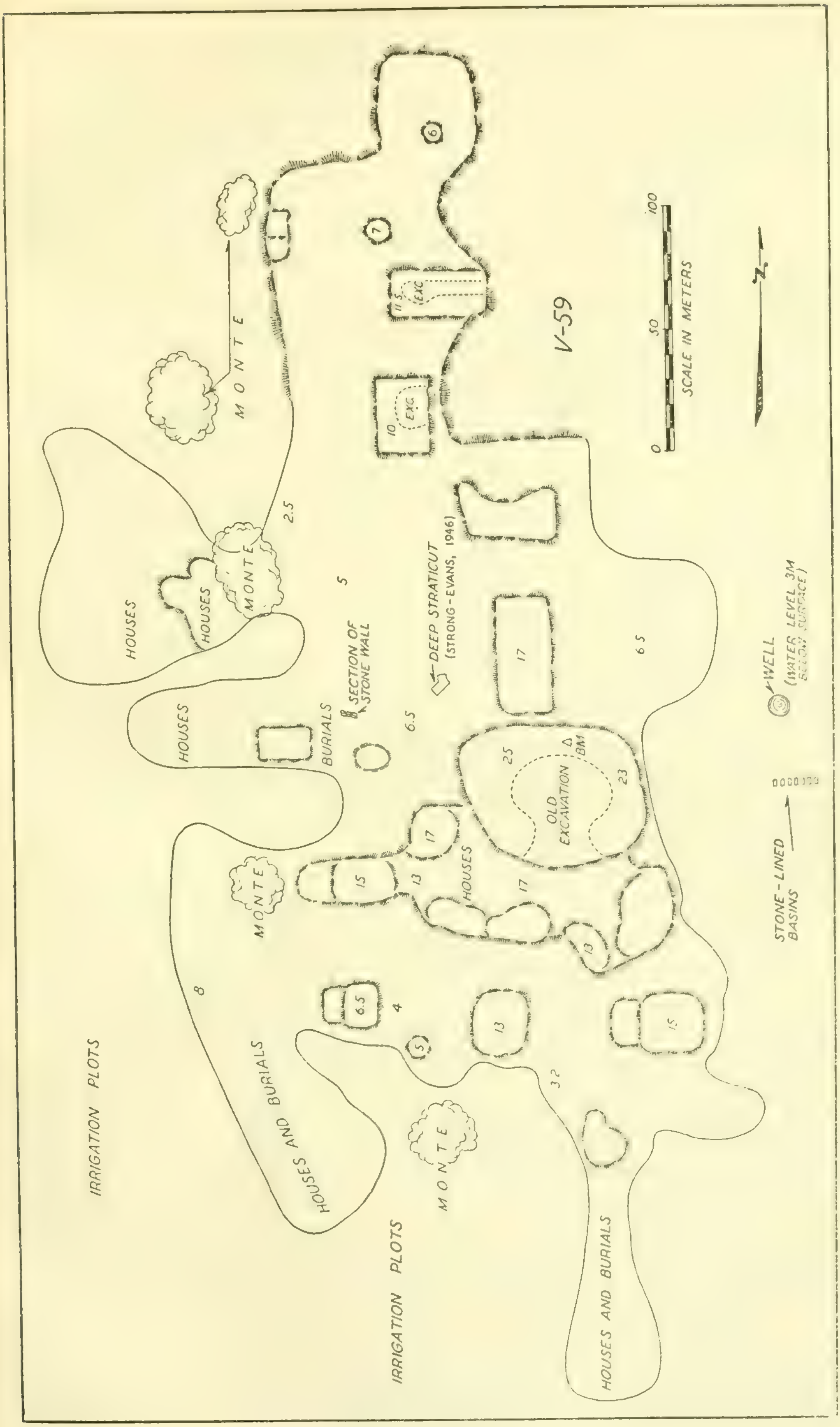
V-59
IRRIGATION PLOTS
IRRIGATION PLOTS
HOUSES
HOUSES
HOUSES
HOUSES
MONTE
MONTE
MONTE
MONTE
HOUSES AND BURIALS
HOUSES AND BURIALS
BURIALS
SECTION OF STONE WALL
DEEP STRATICUT (STRONG-EVANS, 1946)
OLD EXCAVATION
BM
EXC
EXC
WELL (WATER LEVEL 3M BELOW SURFACE)
STONE-LINED BASINS
SCALE IN METERS
0
50
100
N
6
7
11.5
10
2.5
5
6.5
6.5
17
25
23
17
15
13
17
13
8
6.5
4
5
13
15
32

FIGURE 25.
(See legend on opposite page.)

The knolls or small mounds on the platform also are construction mounds as demonstrated by excavations. The great central pyramid, on the other hand, was a true pyramidal structure. Twenty-five meters high, it has approximate basal measurements of 70 by 65 meters. An old excavation, cutting deep down through its summit, shows solid brick adobe construction with algarroba logs used as binders. No superimposed floors, walls, and other house features, such as are found in the smaller mounds or knolls, are evident in the big pyramid.

Bennett's (1950) excavations in V–59, and in neighboring Pyramid-Dwelling-Construction Complexes, as well as in Dwelling-Construction Mounds, offer considerable sequence information on room types and adobe construction types. These architectural sequences may be correlated with the Early, Middle, Late Gallinazo divisions established by the ceramics as follows: In the Early Gallinazo Period rooms averaged 2.25 by 1.85 meters in size and were entered from the roof. The Middle Gallinazo phase rooms were slightly larger than in the first subperiod, averaging 2.5 by 2 meters. Again, they were entered from the roof with the walltops, presumably, used as pathways of access. Late Gallinazo rooms range in size from 2.8 by 2 meters to 1.4 by 1.1 meters. Boxlike partitions, not recorded for the earlier subperiods, are noted in some of the rooms; and, unlike the Early and Middle phases, doorways of approximately 50 to 60 cm. width were common in many of the rooms, indicating a shift from roof to side entrances in late times. Corridors or passageways between rooms appear for the first time in the Late Gallinazo phase.

Throughout the three subperiods the walls ranged in thickness from 30 to 60 cm. In Early Gallinazo, wall construction was usually of tapia blocks. These walls had, apparently, been poured in plank frames. Bennett measured these wall construction units as 40 cm. wide, 1.5 meters high, and from 1.5 meters or more in length. In Middle Gallinazo there was considerable experimentation in adobe types. Ball adobes, odontiforms, hemispheres, subcones, and wedge-shapes all appear. These are all hand-shaped types. In addition, the first mold-made, cane-marked brick type adobes came into use. Many of these are large, approximating 48 by 30 by 17 cm. A few of the smaller ones (35 by 28 by 18 cm.) are also described. In Late Gallinazo there are two adobe types, cane-marked and plain brick-shaped small adobes. The plain-surfaced type was found to be later than the cane-marked variety. Bennett gives 31 by 25 by 16 cm. as an average size for these Late phase adobes. In rare instances, stone wall construction is found in the Late subperiod. On the surface of the V–59 site, near its center, is a section of a wall made of upright stone slabs caulked with clay and coated with clay plaster on one side.

In the Early and Middle phases there are evidences of a few large rooms or courts which probably had some public or ceremonial significance. In V–59, Bennett uncovered a decorated wall in a lower construction level associated with one or the other of these earlier phases. The wall was 13.5 meters long and 1.7 meters high. The decoration was effected by a mosaic of adobe bricks resulting in a fairly complex geometric design. The ornamented wall faced in on what probably was an open, unroofed court.

Dating on the solid adobe pyramids is Late Gallinazo. This is true of the big pyramid in V–59 as well as pyramids in some of the other Pyramid-Dwelling-Construction Complexes. The absence of true adobe pyramids from the Early and Middle Gallinazo phases in sites of the Gallinazo Group is somewhat curious, however, as such pyramid structures do seem to be associated with these phases in other parts of the Valley.

In contrast to the subsequent changes in adobe architecture within the Gallinazo Period, there are a number of features or characteristics which appear to prevail in all three subperiods. Among these are clay plaster on wall interiors, packed clay floors on bases of artificial fill, pole and thatch roofs, "subterranean" type dwellings, and "honeycomb" arrangement of rooms. Bennett comments on the "subterranean" room concept. Although most or all Gallinazo Period buildings were actually above ground, the roof entrance and the lack of windows of any sort in the rooms has an underground aspect, possibly suggestive of earlier subterranean or semisubterranean prototypes. Side doors appear in Late Gallinazo, but some rooms even of this period are still entered from the roof and windows never appear in the Gallinazo Group sites. Room arrangements of the "honeycomb" type are characteristic throughout all subperiods (pl. 16, *top*, *center*). Numerous small rooms were crowded together without plan except within the immediate house or room group. Within each group, rooms were, of course, arranged checkerboard fashion with a general north-south and east-west orientation of the walls. There was not, however, any evidence of over-all planning or layout of a town or city. Growth was apparently haphazard and accretional, conforming only to the pattern of "honeycomb" units. Superimposition of rooms was the rule. Walls sometimes served more than one floor level; in other instances overlying walls were found to be at slightly different angles of orientation than the walls of the house cluster over which they were built.

The function of the V–59 site, and others like it, was, as stated, for dwelling and for public ceremonial purposes. Burials in the site were rare. All were found to have been intrusive into the upper levels of the site, and all date from within the Late Gallinazo subperiod or later.

It seems likely that the irrigation plots which surround the site on the west and south sides were cultivated by the people who lived at V–59 and in nearby sites dating from the same period. In this regard it is significant that there is no occupation of any consequence other than that of the Gallinazo Period in the Gallinazo Group sector of Lower Virú-North. These irrigation plots are very faint, and, unfortunately, I have no adequate detail drawings of them. They were made entirely of earth, and their pattern, as near as could be determined, is that of simple "hairpin" loops.

East of the big pyramid at V–59, at a distance of about 30 meters, are a series of stone-lined basins. These were cleared by Strong and Evans. They are located on flat natural ground. There are 8 of the basins (fig. 25) arranged in a row. Each is about 2 meters in length, a meter wide, and less than a meter deep. They are V-shaped in cross section with a narrow canal at the base of each which leads to a small drain hole at one end of the canal. Three algarroba beams with the upper surfaces flattened spanned each basin and were found fastened into the stone-lined walls at a uniform level. The upper end of each basin, that opposite the drain hole at the terminus of the basal canal, was closed with rock masonry. Calcareous deposits on the rock lining of the basins indicates that they were probably used for some kind of washing with the water running down the incline into the drain. Only Gallinazo Period sherds were found in association with these basins, and it is most likely that they date from this period.

Ceramic dating by Bennett, as well as supporting architectural chronology, show occupation during all three of the Gallinazo subperiods at V–59. A stratigraphic pit, excavated near the center of the Gallinazo platform by Strong and Evans, verifies this but extends the sequence slightly at each end. The lower levels of the Strong-Evans pit show Late Puerto Moorin Period types (p. 80), and in the top meter or so of refuse a few Huancaco Period sherds were also obtained. Presumably, occupation during these earlier and later periods was trivial.

V–77 (*Huaca San Juan, No. 1*).—The Huacas San Juan have attracted the attention of several investigators (Kroeber, 1930, p. 79; Bennett, 1939, p. 21; Larco Hoyle, 1938–39, vol. 1, p. 62); but none of them, to my knowledge, has excavated or collected there (pl. 21, *top*). The larger of the two mounds is on the edge of open fields, on the north side of the river, not far from the mouth of Queneto quebrada (pl. 21, *center*). The modern road leading up to Tomaval Hacienda comes within a few meters of the toe of one of the aprons or attached mounds (Quad E–2, northwest). Maximum over-all measurements of the site are 190 meters on a northwest-southeast axis and about 90 meters on the northeast-southwest axis. The total site accumulation would appear to be artificial as the surrounding ground is flat; however, there is a possibility that an inner core of the highest part of the structure could be a natural hill. The basic impression of V–77 is that it is a flat-topped pyramidal mound site; and this is certainly the central and most imposing feature of the complex. Closer examination reveals, however, that the main pyramidal mound has connected mounds, platforms, and rock-walled structures. Because of these additional features, which suggest the associated architectural elements that one finds in conjunction with such a big Pyramid-Dwelling-Construction Complex as V–59, I have grouped V–77 with sites of this class.

Nearly all of the mounds or platforms of V–77 are rock-covered. Most of the stones are fairly large (30 to 50 cm. in diameter as an average), and are now found strewn about on the mound flanks and tops in a complete jumble. There are still some intact stone facings here and there, and these show a masonry type of irregularly shaped boulders which are roughly coursed and placed on edge with the larger surfaces forming the facings (pl. 20, *bottom*). Stone courses are interspersed with courses of flat spalls. Mud mortar is plainly in evidence in those places where the facings are still held together.

The largest feature of the site is the great mound or pyramid which has a summit elevation of 10 meters above the surrounding fields and measures 73 by 70 meters at the base. The slightly longer diameter is oriented in the same northwest-southeast direction as the general layout of the site (fig. 26). The base is well-defined by a stone wall which is about 1 meter in width. The summit platform of the big mound is 44 by 37 meters with the long diameter also in line with the northwest-southeast orientation. I could detect no stone wall foundation outlining this summit although one may have existed. As indicated on the map, the northeastern one-third of the summit is slightly lower than the remainder. The slope of the mound flanks, from summit to base wall, is quite steep.

On the southeast side of the big mound are two connected platforms. The one immediately attached to the main mound is perhaps 2 meters lower; the other is some 2 meters lower than the first. The first or higher platform measured 42 by 40 meters, and on its top there are segments of stone-wall foundations which could be traced out into two or three fairly large rooms. In one of these rooms, in which *huaqueros* have excavated, a section of a thick adobe wall is revealed. The adobes are plain and rectangular. I measured one as 40 by 25 by 14 cm. Judging from its position, it is likely that this adobe wall was a part of a structure later overlaid by the stone-wall foundations.

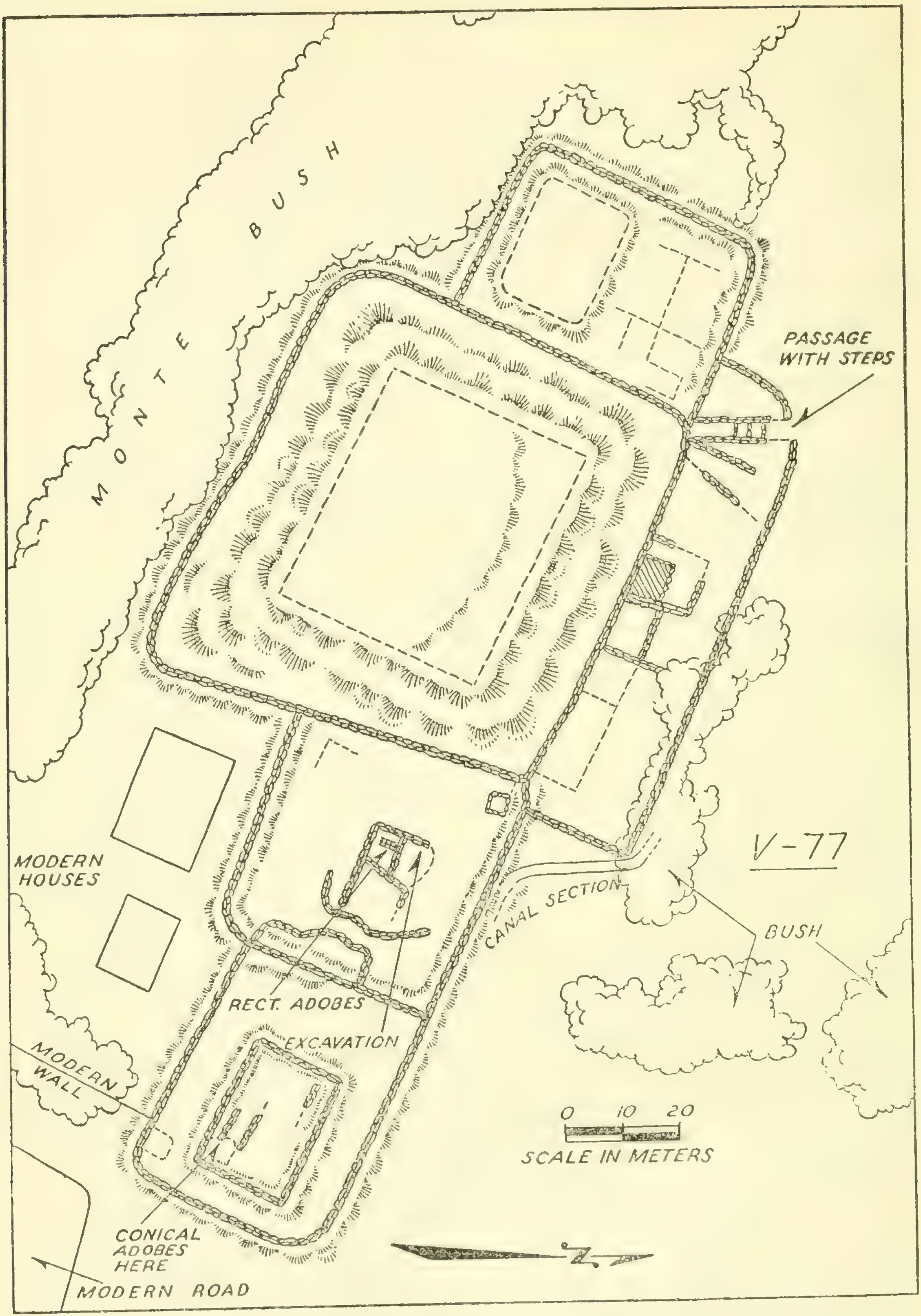
MONTE BUSH
PASSAGE WITH STEPS
V-77
MODERN HOUSES
CANAL SECTION
BUSH
RECT. ADOBES
EXCAVATION
MODERN WALL
0 10 20
SCALE IN METERS
CONICAL ADOBES HERE
MODERN ROAD
N

FIGURE 26.—Site V–77 ground plan. A stone and adobe Pyramid-Dwelling-Construction Complex. Total height of summit of big mound approximately 10 meters. Late Gallinazo Period with possible portions of structure dating back to Puerto Moorin or even earlier.

The second or lower platform is 45 by 34 meters, and it sustains a small rectangular superstructure or flat-topped pyramid which is 24 by 16 meters (pl. 21, *bottom*). This smaller superimposed platform rises a meter or so above the underlying platform. It is outlined by a basal stone wall, as are the other platforms, and on its summit there are segments of stone-wall foundations. It was from a corner of this little superimposed pyramid that the conical adobes were found (see section on Puerto Moorin Period, p. 81). These conical adobes measure 17 cm. across the base, but none was pried from position so that a length measurement was not obtained. It is probable that this little upper platform or Pyramid Mound was made of solidly packed conical adobes and faced with stones.

On the northwest side of the big mound is another elevated platform or adjoining mound structure. Outlined by a stone-wall construction, it measures 45 meters northeast-southwest and 32 meters on the northwest-southeast axis. The northeastern half of the platform is the lower and is probably 3 to 4 meters above the surrounding fields. On this section of the platform there are evidences of stone foundation walls of a half-dozen conjoined, rectangular rooms. On the southwestern half of the platform there is a steep, flat-topped mound which rises an additional 2 meters or so above the remainder of the platform. This mound has a summit of about 23 by 17 meters, and its basal dimensions are, of course, larger. Its maximum height does not connect with the adjacent big mound so there is a narrow gulley between the slopes of the two mounds.

The remaining structural features of V–77 are enclosed in a stone wall which borders a low platform attached to the northeast side of the big mound and a portion of the attached platform and mound just discussed. This enclosed platform is 17 meters wide and 85 meters long. Adjacent to the foot of the big mound, and within the enclosure, there are stone foundation evidences of at least 5 rooms (see fig. 26). One of these rooms has a large, raised platform or banquette in one corner. At the northwest corner of this enclosure there is an entrance passageway which leads to some steps. These steps appear to lead up to the corner of the big mound, but if they once continued up the side of the mound these higher steps are now destroyed. Near this passage-stairway there are some sections of wall foundations, but their original form is difficult to determine. At the southeast, or opposite, end of the enclosure a short section of a small canal can be made out as it winds around the base of the pyramid complex and the platform. I was unable to follow this canal any farther than is shown on the map (fig. 26). Possibly it is an ancient feature.

A large pottery collection of over 1,000 potsherds was made from upon and around the base of all of these structures described. Ford has dated this as Late Gallinazo.

V–88 and V–89 (*Castillo de Huancaco*) (*also includes V–38, V–90, V–91, and V–93*).—The great adobe site of Huancaco (Quad C–4, southeast) was divided into five sections for the purposes of field collections and cataloguing. These are V–38, 88, 89, 90, 91, and 93. Actually it is one complex site of which V–88–89 compose the central portion. The site dates largely from the Huancaco Period and will be described in that section of this report (pp. 205–210). However, in the V–89 zone of the building group, surface collections indicate a Gallinazo Period occupation of the Middle and Late phases. This Gallinazo dating is based upon two large collections of over 1,200 and 300 sherds, respectively. It is likely, then, that some of the Huancaco site construction, particularly its northeastern end, was begun during the Gallinazo Period.

V–149 (*Huaca El Gallo*).—V–149 is a Pyramid-Dwelling-Construction Complex located in Huacapongo-North (Quard F–2, northwest). It consists of a large mound of earth and rocks and of some outlying smaller structures. Two ceramic collections from the principal part of the site, totaling over 500 potsherds, date as Huancaco Period. A third collection, of 142 sherds, was gathered along the eastern edge of the site in a section without structures or opened graves. This third collection dates as Middle Gallinazo.

I am of the opinion that the site structures date from the Huancaco Period and have described it under that section (pp. 210–213). It is possible, but not proved, that the Middle Gallinazo occupation bears some relationship to the structural complex at the site.

V–152 and V–153 (*Tres Huacas*).—This Pyramid-Dwelling-Construction Complex of the Gallinazo Group (Quad B–4, northwest) has a similar topographic situation to that noted for V–59. It is on the edge of the scrub *monte* growth in Lower Virú-North. V–59 lies directly north of V–152–153 at a distance of a little over one kilometer. Bennett (1939) refers to these two sites as his "Ca–10c" and "d."

The base of the site is an irregular U-shaped platform which sustains several higher platform features. The base of the U is 140 by 50 meters, and has a due east-west orientation. The two arms extend out from the base in a northerly direction. The western end of the site (V–152) is about 50 by 100 meters; the eastern arm (V–153) measures some 70 by 100 meters.

The elevation of the platform varies from 1.5 to 6.5 meters above the surrounding ground. The two highest hummocks on the platform, which may be the pyramids, are 14 meters above ground level. Each of these probable pyramid features has connected terraces or aprons. In addition to the pyramid hummocks there are other smaller hummocks with elevations of from 5 to 10 meters (fig. 27).

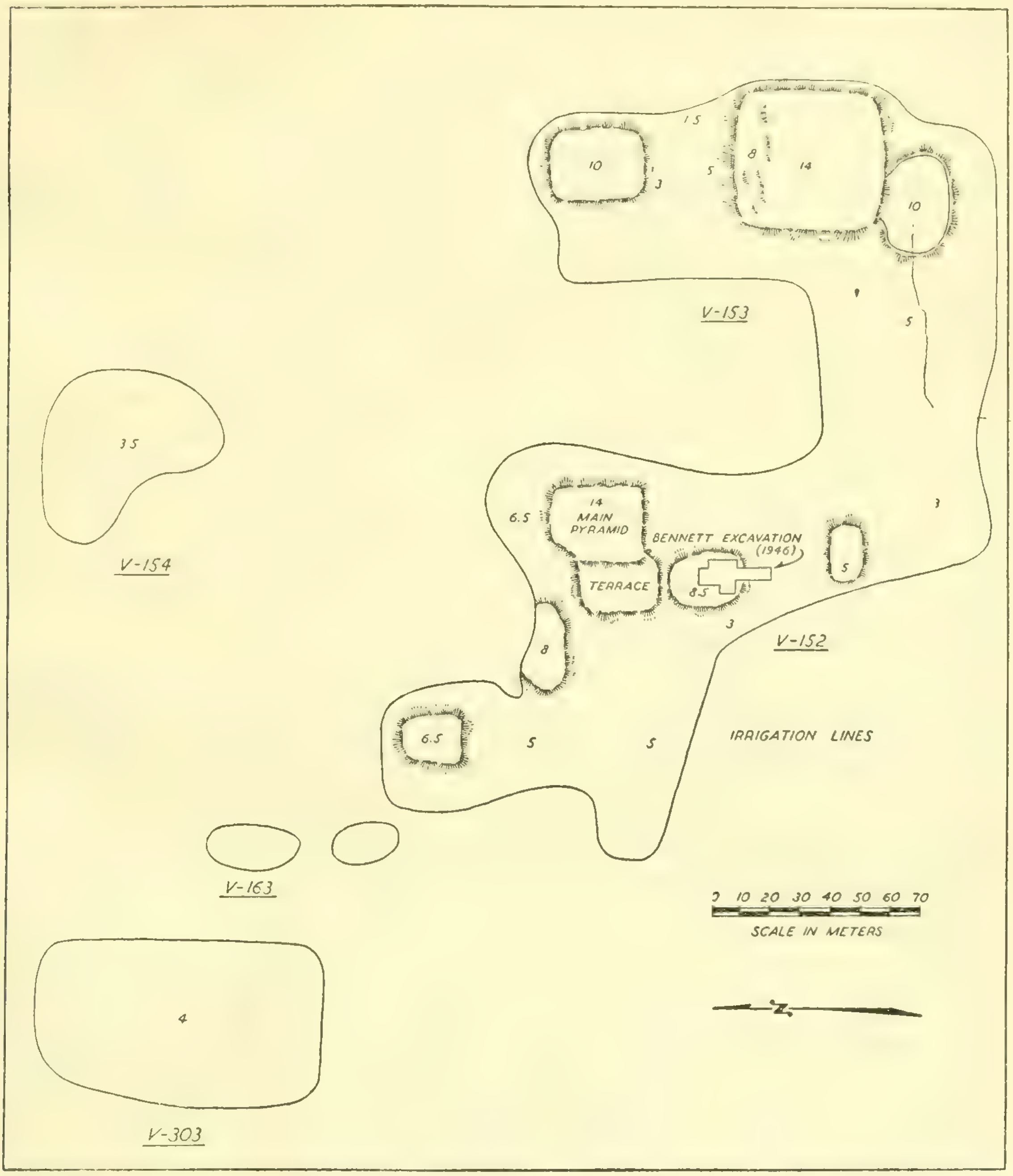
15
10
3
5
8
14
10
V-153
5
35
V-154
14
MAIN
PYRAMID
6.5
BENNETT EXCAVATION
(1946)
TERRACE
8.5
3
5
3
V-152
8
6.5
5
5
IRRIGATION LINES
V-163
0 10 20 30 40 50 60 70
SCALE IN METERS
N
4
V-303

FIGURE 27.—Ground plans of V–152, V–153, V–154, V–163, and V–303. Earth and adobe mound, platform, and house groups. Bennett's (1950) excavations revealed Gallinazo (all phases) construction and Huancaco and Tomaval Period re-use for site V–152–153. V–154 dates as Late Gallinazo with Tomaval re-use. V–163 and V–303 date as Late and undifferentiated Gallinazo, respectively. (Redrawn from Bennett 1946 field drawing. See also Bennett, 1950.)

Bennett's 1946 excavations (Bennett, 1950, pp. 35–46) were made at several locations at the site. The first of these was a set of tests and clearing in conjunction with the main pyramid at V–152. The pyramid platform proper is 30 by 25 meters and has a lower western terrace of 28 by 17 meters. Total pyramid height, as stated, is 14 meters. The upper part of the pyramid was made of rectangular cane-marked adobes averaging 30 by 27 by 17 cm. In the lower sections of the pyramid the construction was of ball-type adobes. Around the base of the pyramid were a number of house sites or rooms. Bennett is of the opinion that the V–152 pyramid was built upon a dwelling-construction foundation of old, filled rooms.

From the southwest corner of the pyramid a decorated wall was found to run in an east-to-west direction (pl. 20, *top*). This wall had only one finished face and appeared to be a terrace retaining wall which faced out into a large room or court. The wall was 1.1 meters wide at the base and 60 cm. wide at the top. It stood 1.8 meters high with the decorated panel being confined to the upper segment. Construction was with ball or hemispherical adobes. The decorated section is done mosaic-fashion with plain slabs, mold-made blocks with inset crosses, and mold-made blocks with step-designs. These blocks are set to create the effect of a running geometric design. The inset or intaglio portions of the designs are black (from firing?) ; the outer faces of the designs are painted in green, red, and yellow. The plaster of the base wall below is white.

Bennett's (1950) most extensive excavations were in a small house mound knoll located to the south of the main pyramid. This knoll measured about 25 by 18 meters and was 8.5 meters above ground level. Bennett's excavation plan was to follow room construction and by a stepping technique to encounter lower-level rooms which had not been built over by later construction. Eight floor levels were distinguished between mound summit and the level of the surrounding flats (see fig. 28). In some cases it was found that an adobe wall had been used in conjunction with as many as 5 different floor levels; in other instances walls were confined to only one floor level. Floors were made of clay and were built over sand and ash fills. Construction of walls varied with an adobe sequence paralleling that noted for V–59. In levels *d*, *e*, *f* (see figs. 28, 29), the earliest, tapia construction was most common, although there was one instance of odontiform adobes. Level *c* was characterized by ball adobes but some cane-marked rectangular adobes also made their first appearance. Level *b* was most commonly denoted by cane-marked adobe constructions; and level *a*, the latest, by plain rectangular adobes. The lower-level rooms had no doorways, while upper-level rooms tended to be somewhat smaller and some had doors. The largest of the rooms cleared in this part of the site averaged only 2.5 by 2.5 meters. Many were as small as 1.5 by 1 meter. A tapia wall with cut-out geometric designs was discovered in association with the lower building levels.

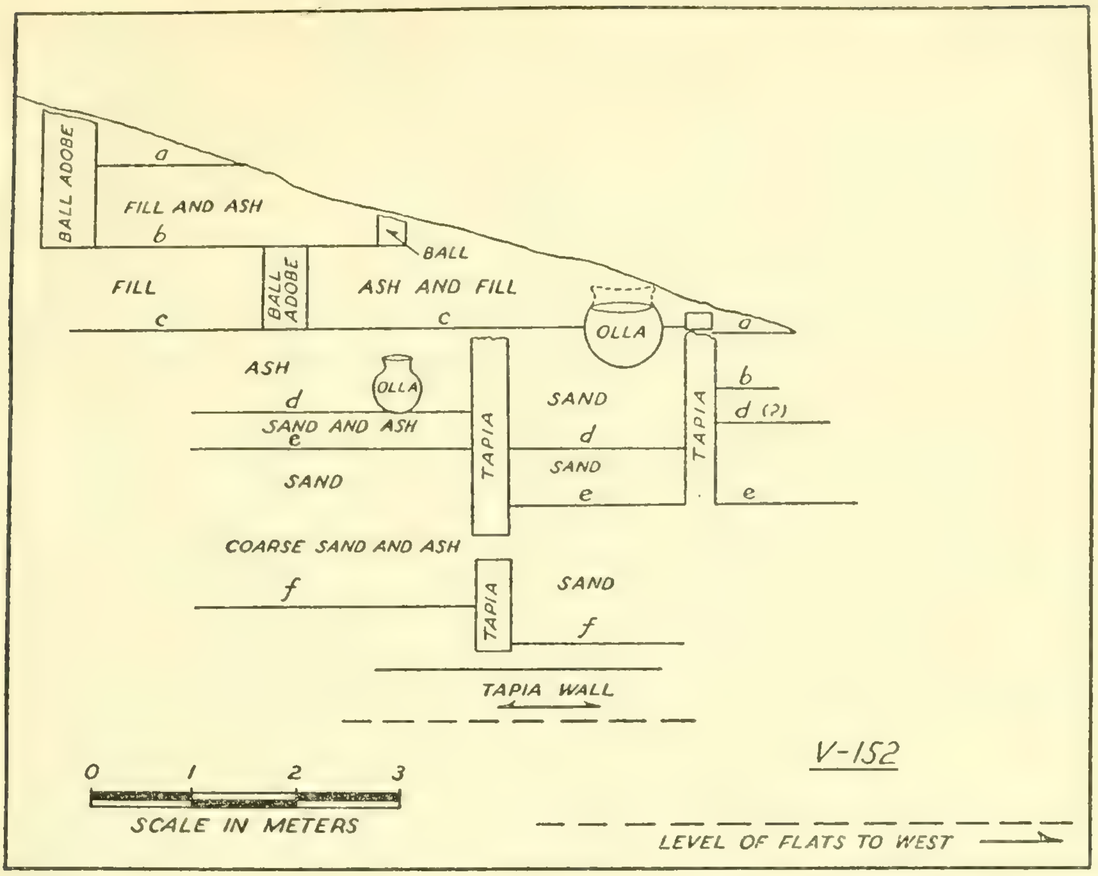
BALL ADOBE
a
FILL AND ASH
b
BALL
FILL
c
BALL ADOBE
ASH AND FILL
c
OLLA
a
ASH
OLLA
d
SAND AND ASH
e
SAND
TAPIA
SAND
d
SAND
e
TAPIA
b
d (?)
e
COARSE SAND AND ASH
f
TAPIA
SAND
f
TAPIA WALL
V-152
0 1 2 3
SCALE IN METERS
LEVEL OF FLATS TO WEST

FIGURE 28.—North-south cross-section of V-152. Superimposed floors and room walls. Letters refer to building stages as in figure 29. (Redrawn from Bennett 1946 field drawing. See also Bennett, 1950.)

In general, rebuilding or overbuilding seems to have gone on as a slow process at V-152. The sequences of adobe types and of room features and room size that was noted at V-59 is recapitulated at this site. All three subperiods, Early, Middle, and Late Gallinazo are represented in the V-152 excavations. Ceramics of these phases correspond to building levels much in the same fashion as at V-59. By inference, the adjoining portion of the site, which we have numbered as V-153, dates throughout the Gallinazo Period. Both V-152 and V-153 have Huancaco and Tomaval Period potsherds on the surface indicating a later re-use of the sites. It is unlikely, however, that either of these later periods are represented in the construction of the platforms, dwelling mounds, or pyramids.

V-155 (*Tres Huacas*).—This mound, along with V-152 and V-153, is one of the "Tres Huacas." Bennett (1939, p. 22) referred to the site in his survey of 1936 as "Ca-10b." It lies north of V-152-153, about halfway between those sites and V-59 (Quad B-4, northwest). The surrounding flats and *monte* scrub are typical of the Gallinazo site group.

Bennett (1950, pp. 46-59) describes the site platform as being 180 meters north-south and 70 meters east-west. In addition, there is a

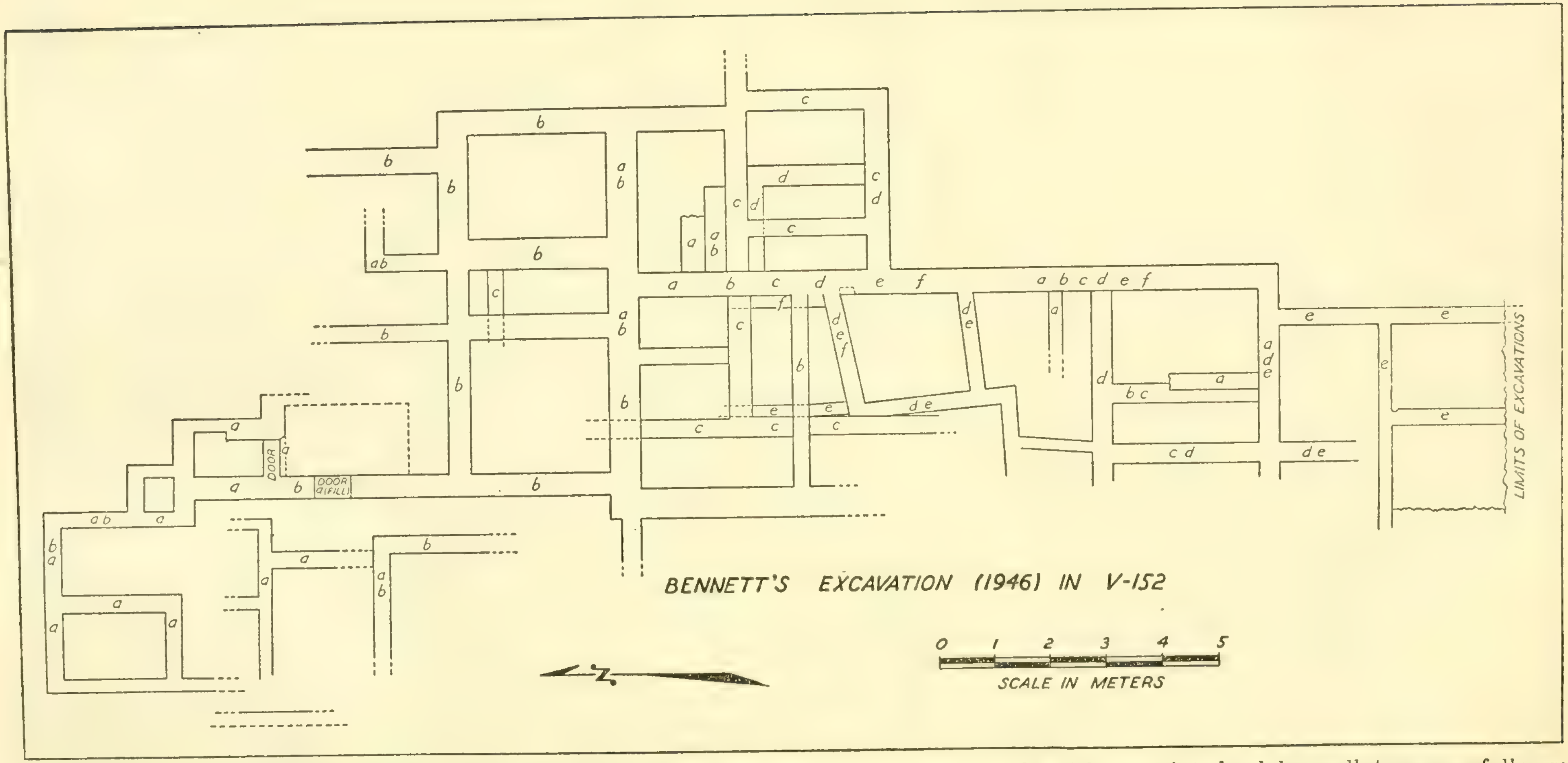
BENNETT'S EXCAVATION (1946) IN V-152
0 1 2 3 4 5
SCALE IN METERS
LIMITS OF EXCAVATIONS
N
DOOR
DOOR a (FILL)
a b c d e f

FIGURE 29.—Ground plan of V–152 excavated rooms. Letters refer to building periods with associated adobe wall types as follows: *a*, Plain rectangular adobes and small ball adobes; *b*, rectangular cane-marked adobes and ball adobes; *c*, occasional instances of rectangular cane-marked adobes, but generally ball adobes; *d*, *e*, *f*, tapia and odontiform adobes. *a* is latest; *f*, earliest. (Redrawn from Bennett 1946 field drawing. See also Bennett, 1950.)

projection at the north end which is 50 meters long and 25 meters wide. The platform, presumably made up of abandoned and filled houses, averages between 4 and 5 meters in height. There are two knolls or rises above the platform. One is low and is obviously composed of a house room cluster. The other reaches a height of 10 meters and is some 35 by 20 meters in extent. It is, possibly, a true pyramid although Bennett questions this. Perhaps it is made up only of superimposed constructions. He notes that the upper adobes in the "pyramid" are cane-marked and that those nearer its base are of the ball type.

Bennett's (1950) excavations in V–155 were confined to the smaller knoll. Ten top-level rooms were uncovered, and it was found that these overlay several levels of other structures. Several construction levels were identified. The standard succession of adobe types, tapia, ball adobe, cane-marked, and plain brick, held for this site.

Ceramic evidence places V–155 as Middle and Late Gallinazo. It is reported that *huaqueros*, digging on the platform, found graves which contained Huancaco Period specimens. This indicates a later-re-use of the site but no post-Gallinazo construction.

V–156 (*Las Velas*).—Bennett (1939, p. 22) numbered this site as "Ca-10a." It is sometimes referred to as Las Velas, but should not be confused with the much larger site of the Gallinazo Group, Huaca de La Vela (V–279). V–156 is about one-half a kilometer southeast of V–59 (Quad B–4, northwest). It is a little over 100 meters east-west and 75 meters north-south. The mass of the site is a platform of earth and old constructions which rises from 3.5 to 5 meters above the flats. There are two knolls or possible pyramid structures on top of the platform. The most easterly one has two summits connected by a lower saddle. One of these summits is 13 meters high, the other 11 meters high. The more westerly pyramid or knoll has only a single cone which rises 11 meters above the plain. Bennett's excavations of 1946 (Bennett, 1950, p. 49) were concentrated in the area between the two pyramids.

Superimposed walls and floors were encountered in these excavations. The two possible pyramids were not investigated. It may be that they were nothing more than exceptionally steep house clusters; on the other hand they may have been solid, purposefully built platforms or pyramids of adobe.

Bennett's ceramics from this site indicate a Middle and Late Gallinazo Period dating.

V–157.—This is a nameless platform and pyramid huaca located one-third of a kilometer to the east of V–59. Bennett (1950, pp. 49–51) mapped and excavated the site. He gives its north-south measurements as 175 meters and its east-west diameter as about 60 meters. The platform which forms the base of the site rises about 5 meters above the flat lands. This platform is crowned with 6 knolls which vary in total height from 6.5 to 10 meters. The smallest of these knolls are almost sure to be house clusters. The larger knolls might be artificial pyramids of adobe, but this is not proven.

Bennett's excavation was made in the platform, not in one of the knolls. Five floor levels were disclosed. Cane-marked, ball adobes, and tapia type construction were all noted. A burial of the Late Gallinazo subperiod was found intrusive through a top level floor showing that it had been made after the final construction phase at the site.

Bennett dates the site as Middle and Late Gallinazo.

V–165.—This is a site composed of a cluster of adobe mounds and platforms which appears to be a small Pyramid-Dwelling-Construction Complex. It was not excavated, but Ford and I visited it and made a surface collection. The site is located in the midst of cultivated fields in Lower Virú-South (Quad C–4, northeast). Its total area could be placed within a circle 90 meters in diameter (fig. 30). The principal mound-platform mass is oriented northwest-southeast on its longer axis. This measures about 70 meters. Maximum width on the other axis is 35 meters. The highest construction of this complex is a

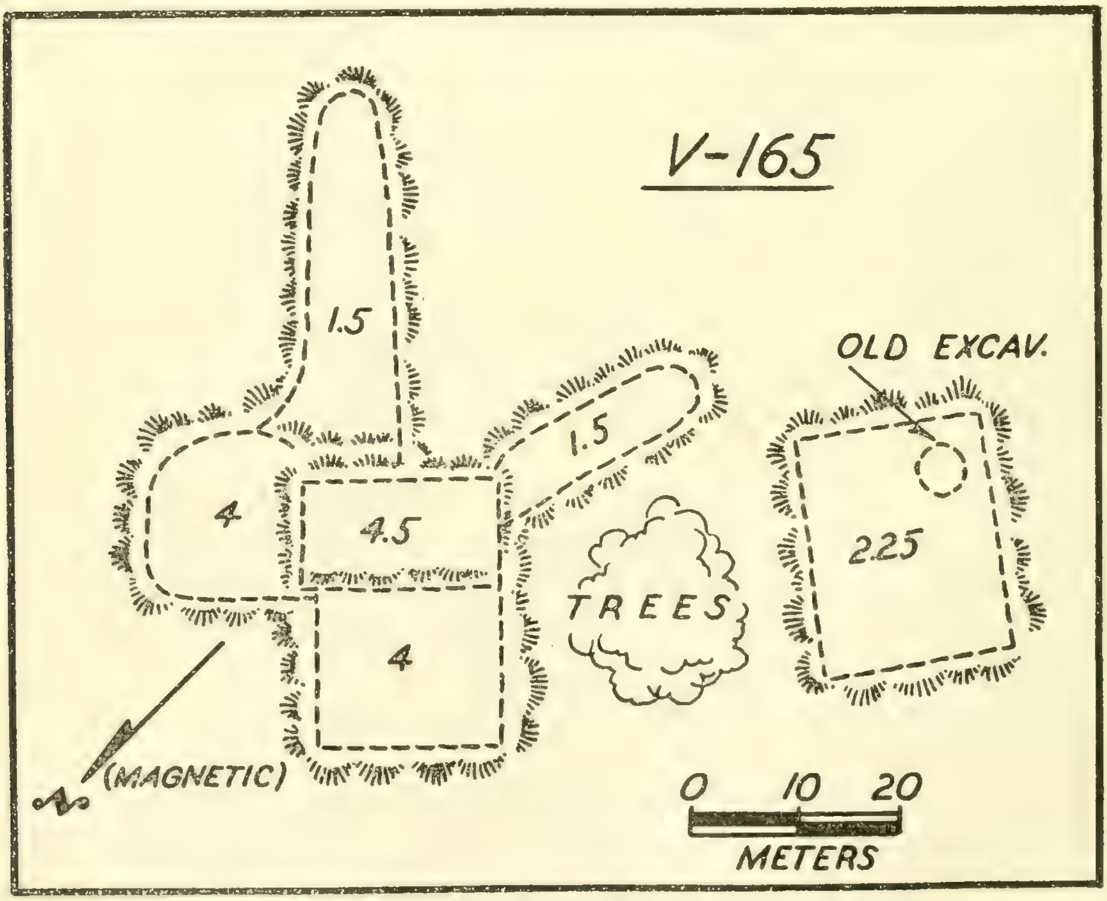

FIGURE 30.—Ground plan of Pyramid-Dwelling-Construction Complex V–165. Late Gallinazo Period. Figures indicate respective heights in meters.

rectangular platform which appears to be a solid pyramid construction of adobes. This feature measures 20 by 10 meters at the summit. It is 4.5 meters high. A slightly lower but larger rectangular apron extends off to the northwest. This apron has measurements of about 17 by 17 meters and is 4 meters high. Extending off in a northeasterly direction from the highest platform or pyramid feature is another apron, 15 by 15 meters and 4 meters in height. A long armlike platform, 35 meters in length and about 8 meters wide, runs in a southeasterly direction from the highest pyramid. There is also a smaller arm or extension which extends south from the highest platform for a distance of 23 meters. This last-mentioned extension is about 6 to 7 meters in width. Both armlike extensions have an average height of only 1.5 meters. At a distance of from 25 to 30 meters southwest of the highest platform is a detached mound platform. This feature is 23 by 18 meters and is 2.25 meters high. Its general orientation is the same as that of the mounds of the other group.

A few adobes were visible at various points at this site. All were rectangular, mold-made, and plain. Several measured to an average of 35 by 18 by 10 cm.

The surface collection of 183 sherds from this site was placed as Late Gallinazo.

V–175.—This is an impressive, middle-sized site which is located on an old stabilized dune in Lower Virú-South. The surrounding land is now covered with scrub growth (Quad C–4, northeast). The entire site can be encompassed in an area about 100 by 200 meters in extent. There are three principal Pyramid Mounds. The largest and most northerly of the three rises some 6 meters above the natural eminence of the dune (pl. 18, *center*); the smallest and most southerly is about 3.5 meters high. Aprons or platform extensions are attached to all of the mounds. There is very little visible in the way of wall structures. On the top of a platform which is connected to the largest mound a few rectangular cane-marked adobes were observed (pl. 18, *bottom*). These measured at an average of 35 by 25 by 16 cm.

Potsherds and other refuse was most abundant on all parts of the site. A collection of nearly 500 sherds was dated as Late Gallinazo. This appears to be a very favorable site for excavation.

V–239.—This site is probably unnamed. Bennett (1939, p. 21) lists it as "Small huaca with a cross on top near the Huaca de la Cruz' (V–162). Larco Hoyle (1938–39, vol. 1, p. 62) maps a huaca near this location which he calls "Huaca de Huancaco." I am not sure if this last is the same site. In any event, it should not be confused with the site referred to as "Huancaco" in this report (V–88–89).

The site consists of three adobe pyramids and associated features. They lie just off the Pan-American highway less than a kilometer south of the Virú River bridge (Quad D–3, southwest). The largest of the three mounds is a steep adobe pyramid, 11.9 meters high (pl. 17, *second row, right*). It is made of cane-marked adobes which measure at an average of 33 by 24 by 14 cm. These adobes are exposed on all parts of the mound and, particularly, in a great excavation which has carried away the entire west corner of the structure. The long axis of the mound is oriented northeast-southwest and has basal measurements of 32 by 22 meters. The summit platform is, approximately, 22 by 12 meters. It is likely that the sides of the mound were constructed in steep narrow terraces, but these are no longer in evidence owing to erosion. Summit structures, if such once existed, are not visible. A modern shrine of wood now caps the highest spot on the top. On the northeast side there is a broad apron which rises 2 to 3 meters above ground level. It is about 23 meters in length but is 32 meters wide. This width is greater than that of the mound proper so that it extends out for 5 meters beyond the limits of the mound. These 5 meter-wide wings are higher than the interior portion of the apron, giving the total effect of a sort of court bounded by the mound on one side and by the raised wings on two sides. Within the center of the court there are some old excavations, and in one of these I noted some plastered adobe walls which gave indications of having formed rather large rooms. The masonry of these walls has some small stone spalling between the adobe courses.

A second and smaller mound (about 3 meters high) lies 50 meters northeast to the largest mound. This places it on the very edge of the highway, and it has, indeed, been clipped through on one side by the road-building operations. It would appear as if this second adobe mound was once connected to the apron or court complex of the first mound by a continuous row of buildings. Today, all that remains of these connecting buildings is a ridge of scattered adobes.

A third mound is 25 meters northwest of the first mound. Built of cane-marked adobes like the other two, it is about 3 meters high but larger in extent than the second mound.

Other than height estimates with a hand level, no measurements were taken on either the second or third mound. The surface collection of pottery was made only from the vicinity of the first mound and its adjoining apron. This collection is dated as Late Gallinazo.

V-240 (*Mochan or Huaca Amarilla*).—Mochan is one of the most attractively situated ruins in Virú Valley. It is a large L-shaped pyramid of adobes situated on the north bank of the river about one kilometer south of the Hacienda Calunga. The surrounding countryside is in cultivation and large trees border the river's edge. Bennett (1939, fig. 1) locates Mochan, but places it, incorrectly, on the south side of the river. Larco Hoyle (1938–39, vol. 1, p. 62) places it correctly (see Quad C–3, southeast).

The ruin is large and well-preserved. It is constructed entirely, or as near as can be determined from surface examination, of cane-marked adobes. Adobes from the base of the highest pyramid platform averaged about 39 by 24 by 12 cm.; those from the upper portion of this same platform were somewhat larger, averaging 46 by 28 by 15 cm. The long axis of the total structure is placed northwest-southeast. Exact measurements of old foundation lines are difficult to obtain due to talus slopes of eroded adobe, but it is safe to say that the over-all maximum length of the structure is just under 100 meters (see fig. 31). The maximum cross-diameter, taken at the northwest end of the structure, is about 50 meters.

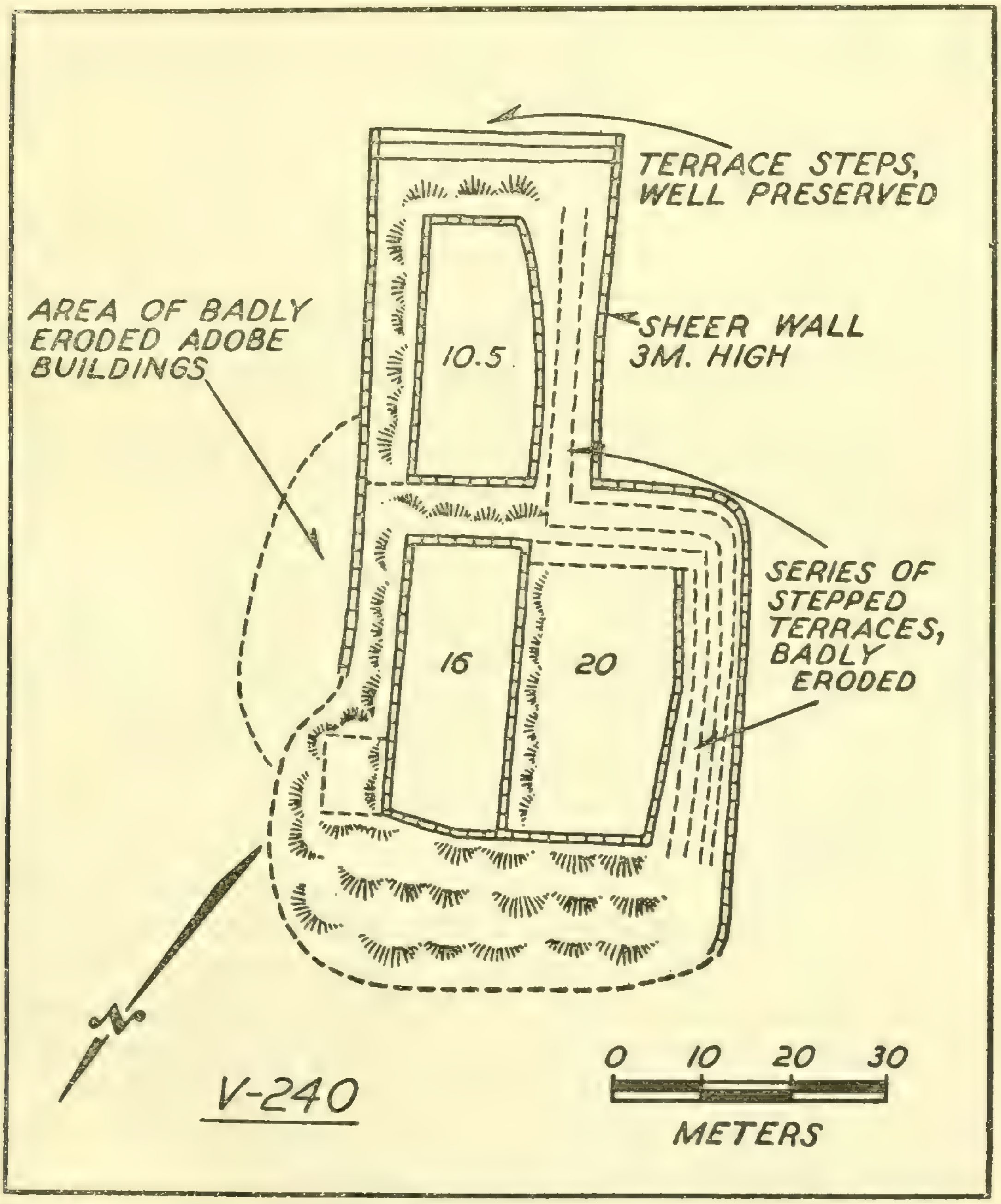
TERRACE STEPS, WELL PRESERVED
AREA OF BADLY ERODED ADOBE BUILDINGS
10.5
SHEER WALL 3M. HIGH
SERIES OF STEPPED TERRACES, BADLY ERODED
16
20
0 10 20 30
METERS
V-240

FIGURE 31.—Ground plan of Mochan (V–240). A Pyramid-Dwelling-Construction Complex. Late Gallinazo Period. Figures indicate heights in meters.

There are three principal platform levels to the mound. The highest platform is at the west-northwest corner of the site and rises 20 meters above natural ground level. On its south and south-western sides at least 5 narrow, steep terraces can still be made out. The summit platform measures 30 by 18 meters with the long axis being that of the long axis of the total structure. Paralleling the highest platform and immediately adjacent to it on the northeast, is the secondary platform which has a height of 16 meters. The secondary platform summit measures about 30 meters in length by 14 meters in width. Attached to the secondary platform, on its northeastern flank and at a somewhat lower level, is a small rectangular terrace 9 by 7 meters. Vague outlines of adobe walls indicate old rooms on this little subsidiary platform. The third and lowest of the big platforms is attached to both the primary and secondary platforms and extends off from these in a southeasterly direction. It is 10.5 meters high and its summit is 30 by 15 meters. Basal measurements of this lowest platform are 40 by 27 meters. At least two steep terrace steps are traceable on its southwestern flank, and these connect with some of the similar terrace steps on the southwest and south flanks of the highest platform. The base of the lowest platform is outlined very definitely by a steep adobe wall 3 meters in height. At its southern end there are three narrow, steep terraces along the base, and these are still in an excellent state of preservation.

House structures have been mentioned only for the small subsidiary terrace platform connected to the secondary platform. More structures were once in existence in this same part of the site. All along the northeast side of the base of the platforms there is an area, totaling about 40 by 7 meters, in which the very eroded and battered walls of rooms and houses can be seen. The dwelling complex features of V–240, in addition to the pyramid features, are more limited than those of some of the other Pyramid-Dwelling-Construction Complexes; but they are, nevertheless, present.

A collection of over 300 sherds from the platforms and basal areas of V–240 is dated as Late Gallinazo.

V–279 (*Huaca de la Vela*).—This little-known site is located in deep *monte* growth a little over 1 kilometer northeast of V–59 (Quad D–2, northwest). From all reports it is the second largest Pyramid-Dwelling-Construction Complex in the Gallinazo Group and one of the largest sites of this type in the Valley. I did not visit the site during the 1946 survey. Bennett (1950, pp. 51–53) describes it as a series of connected platforms and high mounds or knolls. Remnants of adobe constructions are also in evidence.

Bennett dates the site, on the basis of a surface collection, as Late Gallinazo.

This important site should be investigated in the future.

ISOLATED PYRAMID MOUNDS

Explanatory note.—These are mound sites which are not part of a large Pyramid-Dwelling-Construction Complex but which stand alone as rectangulate, flat-topped pyramidal mounds, presumably of a substructural function. As such, they are comparable to the "Pyramid Mounds" discussed under the Puerto Moorin Period. Unlike the Puerto Moorin mounds, all but one of this group of six have a single period dating.

Identification as to functional type was made upon the basis of shape and construction materials. Three mounds are in the upper or middle Valley and utilize stone in the construction; the remaining three are in the lower Valley and appear to be made of adobe clay. They are described in the following order with the adobe or clay mounds listed last:

V–215
V–216
V–221
V–167
V–169
V–275

V–215.—This is a low mound apparently composed of a mixture of earth and small rock rubble. It is situated on the Valley floor of Huacapongo-South in a field that has been very recently cultivated (Quad E–2, northeast). Rectangular in shape, the mound platform proper measures approximately 25 by 25 meters and is a little over 1 meter in height. The orientation is on or very near the cardinal directions. On the east side there is a rectangular apron or slightly lower attached platform. This second feature measures about 15 by 12 meters.

An old excavation near one corner of the main platform has revealed some fragments of plain, rectangular mold-made adobes. It appears as though these adobes were mixed with the earth and rock as fill, although it is possible that they are remnants of some sort of masonry foundation. No structural alinements, in either stone or adobe, can be made out on platform proper or apron. A modern house stands on the upper platform today.

A modest sized collection (79 sherds) dates as Middle Gallinazo Period.

V–216.—This small low platform mound is very similar to V–215 and is located in the same general vicinity of Huacapongo-South (Quad E–2, northeast). Its construction appears to be of earth and small rocks without heavy rock facing. The mound is very low, no more than 50 cm., and measures 13 meters east-west and 8 meters north-south. Shape is more or less rectangular, and orientation approximates the cardinal points.

On mound summit, at one end, there are remains of a stone-wall foundation, a corner of a building or room. No other architectural features were observed.

A collection of 71 sherds dates as Late Gallinazo.

V–221.—There is a third mound, much on the order of V–215 and V–216, which is in the river valley bottom of Huacapongo-North at a distance of several kilometers east of the other two (Quad F–2, northeast). This mound is L-shaped and constructed on two levels. The upper level, which is only a little over 1 meter in height, is 27 by 7 meters; and the lower level is 15 by 12.5 meters. The orientation of the long axis of the upper level is southwest-northeast. The lower level, which joins the upper at right angles, is attached to the northwest side.

Mound fill is earth and small rocks, as was the case with V–215 and V–216; but in V–221 there are definite outlining or retaining wall foundations of stones which can be traced along the sides of most of the L. These are double-faced walls of cyclopean type.

The entire L-shaped mound unit is enclosed within a large stone-walled rectangle which measures about 40 by 75 meters. The rectangle has the same orientation as the mound, and the southeast retaining wall of the mound is flush with and connected to the short axis of the enclosing rectangle. The enclosure wall is extraordinarily massive, and in many places, particularly on the northwest side, is really an alinement of huge stones rather than a masonry wall. Here the boulders used are a meter in diameter and are arranged in a triple file.

There are other rectangular rock-bordered enclosures in the vicinity of V–221, and it is questionable if these are aboriginal or if they are the work of more recent farmers who have disposed of field stone in this fashion.

V–221 dates as Middle Gallinazo on the basis of a fairly large surface collection.

V–167.—This mound site was visited by Ford and me during our survey and was later excavated by Collier. My examination of the site was very casual, but the following description and approximate measurements are offered.

The site consists of two relatively small adobe Pyramid Mounds which are situated on the border of cultivated land in Lower Virú-South (Quad C–4, northeast). The larger of the two mounds is about 5 meters high and 25 meters square in base dimensions. The other mound is about 3 meters in height and 8 meters square in base size. They appear to be made of solid packed rectangular adobes of the mold-made, plain variety (pl. 17, *bottom*, *right*).

I noted no other attached or surrounding constructions, but along one side of the larger mound there is a low mounded area which rises from 50 cm. to 1 meter above the level of the cornfields. This mounded area, some 100 by 30 meters in extent, is covered with sherds, broken shell, and other evidences of cultural detritus.

A large surface collection gave a date of Late Gallinazo, and this may date the pyramids; however, Collier's excavations revealed both Huancaco and Tomaval materials.

V–169.—This little nameless mound is almost certainly a pyramid (pl. 17, *third row, right*). It sits alone in the midst of cultivated fields less than a kilometer south of the Virú River in Lower Virú-South (Quads C–3, southeast, and D–3, southwest). It is steep, about 4 meters high, and rectangular in outline. The base measures 17 by 7 meters. The summit platform is well-defined and square, measuring just a little less than 7 meters. There are no definite adobe outcrops, and a few old pot holes show only clay rubble or tapia (?) fill. The mound dates securely as Early Gallinazo. This is of particular interest as Bennett (1950) has shown that tapia construction was most characteristic of the earliest Gallinazo Period in the Gallinazo site group proper.

V–275.—This mound is clearly pyramidal in construction (pl. 18, *top*). It is located in Lower Virú-North a few hundred meters north of the river bank. The surrounding land is flat and in pasture or cultivation. The mound is 8.3 meters high and extremely steep. Its base measurements are estimated at 35 by 60 meters at the outside. The summit platform measures 5 by 10 meters, and there is a lower level platform, set about 2 meters below the summit elevation, which slopes off to the southwest.

The lower portions of the mound were eroded, but rectangular, mold-made, cane-marked adobes were seen on the summit. These measured 40 by 26 by 11 cm.

Although I saw no evidence of old grave excavations, I picked up a white-painted stirrup-spout fragment on the slopes of the pyramid. The style of the spout is Late Gallinazo.

Ford's large collection dates conclusively as Late Gallinazo.

EARTH-REFUSE MOUNDS

Explanatory note.—The Earth-Refuse Mounds of the Gallinazo Period are very similar to those of the preceding Guañape and Puerto Moorin Periods. They are small, amorphous hillocks of earth and clay mixed with cultural detritus. They are found in the lower section of the Valley where natural stone is scarce. In appearance they resemble the Dwelling-Construction Mounds, and many of them may have adobe structures within them. It is definitely known, however, that some of them contain no structural nucleus like the Dwelling-Construction Mounds. In several instances they have been found to contain burials although it is doubtful if this was their primary function. There is no evidence that such mounds were ever built up over interments; but, conversely, neither can we prove that the burials were always intrusive into them. Quite possibly these mounds were dwelling sites on or in which no adobe structural evidence remains. Perhaps the buildings on or covered by these mounds were made of perishable materials. Possibly, too, these mounds were accumulations of salt-impregnated soil which had been scraped from the surface of the tillable lands by the prehistoric agriculturists. They also may have had dual origins and functions, being both *salitre* piles and living sites.

In this section 16 sites are discussed. Although relegated to this group, many of them have never been excavated to determine their true nature. Most of them were both built and used during the Gallinazo Period. A few, however, were begun in earlier times and continued to be used into the Gallinazo Period; still others were in use in periods subsequent to Gallinazo:

V–164
V–241
V–247
V–251
V–260
V–261
V–262
V–285
V–289
V–293
V–307
V–308
V–272
V–302
V–306
V–309

V–164.—This mound is near the center of the Gallinazo Group (Quad B–4, northwest). It stands about 1.8 meters above the surrounding flats and measures 21 by 17 meters. Bennett (1950, pp. 57–60) excavated a series of trenches in the mound and found a number of burials accompanied by grave ceramics. These graves were not marked in any fashion nor did they appear to be intrusive. Most of them were over 2 meters below surface or below the natural ground level. Some occupational refuse was found in the mound, but this was not abundant enough to imply that this was a refuse mound. No evidences of structures were encountered in the six trenches made by Bennett nor in one excavated by myself. A generalized cross-section of the mound, as recapitulated by Bennett, shows (from surface down): 40 cm. of loose dust and sand; a very thin *salitre* cap of a few cm. thickness; 40 cm. of hard clay; 40 cm. of more clay with charcoal streaks, shell, and some potsherds; and a basal clay which contained the burials. This basal soil zone may be the natural clay of the plain.

Bennett (1950 p. 60) has summarized the puzzle of V–164, and of other similar mounds. I can do no better than to quote him:

> This mound, like others of the same kind, presents a difficult problem in interpretation. The distribution of burials, essentially around the outer edges, would not suggest that the mound itself was for this purpose. On the other hand, the mound was certainly not a house site cluster, since no walls were found, although the sherds and charcoal imply some domestic use. There is no evidence that the burials were intrusive in the mound, although some of the upper ones must be. Those below the level of the flats might well antedate the mound construction. Sherds were not found in sufficient quantity to make it worthwhile to isolate them by levels.

Thus, the mound may be habitational, with no remains of permanent type dwellings left, or it may be an earth-*salitre* pile.

Bennett dates the burials as largely of the Middle phase of the Gallinazo Period.

V–241.—This is a small earth hill in the fields not far from Santa Elena Hacienda, Lower Virú-North (Quad C–3, southwest). It is oval and loaf-shaped and about 3.2 meters high. The surface is covered with loose dust. Potsherds are scattered about, but there is no other clue as to the nature or origin of the mound.

A small collection is placed as Late Gallinazo.

V–247.—A small earth mound in the Santa Elena district (Quad C–3, southwest). Oval in shape, this little hummock measures about 50 by 30 meters and stands 1.25 meters above the fields. Sherds were scattered about the dusty surface, but no structural evidences were seen nor was there evidence of old grave digging.

A large collection dates as Late Gallinazo.

V–251.—The site is in the heart of the Gallinazo Group area, a few meters distant from V–164 (Quad B–4, northwest). It is a small earth mound, 30 by 13 meters and 1.4 meters high (pl. 17, *third row, left*). It is ovoid-rectangular in shape, and the small diameter is oriented a few degrees east of north.

I excavated two trenches (pl. 17, *bottom, left*) into this mound during the 1946 season in Virú. Trench 1 was placed along the north or northeast side of the mound. It was a cut 1.8 meters wide, 5.8 meters long, and 2.5 meters deep. Trench 2 cut across the west or southwest side of the mound. This excavation was 2 meters wide, 5.5 meters long, and 2.5 meters deep. The soil conditions revealed in both trenches may be summarized as follows (from surface down): 25 cm. of dust, sand, and *salitre* without cultural material; 50 cm. of soft clay fill; 25 cm. of what appears to be an old occupation level; 25 cm. of clay fill; a few cm. of ash; and from 1.3 meters down to 2.5 meters, heavy clay with occasional flecks of charcoal and other organic material. It was not clear at what point we struck the natural clay of the flats. Presumably, the ash layer, at 1.3 meters below surface of the mound, was the old ground level; however, as noted, charcoal mixture and other cultural evidences continued down into the clay below this depth.

No burials or caches of pottery were found in these trenches, although a complete pottery figurine of the Gallinazo style was recovered from clay fill at a depth of 67 cm. below surface. Potsherds were fairly numerous, most of them coming from above the 1.3-meter depth line. Ford, who has analyzed the collections, reports both Middle and Late Gallinazo components. Trench 1, which was excavated as a unit, yielded a collection of 229 sherds which are placed as Middle Gallinazo. Trench 2 collections come from two arbitrary levels. The first, from surface down to a depth of 1 meter is dated as Middle Gallinazo; the second, confusingly, comes from 1 to 2 meters deep but has been assigned a Late Gallinazo date by Ford.

If the dating of these collections is correct, the mound, of necessity, can be interpreted only as an artificial structure, not a habitation site of succesive occupations. It must have been made in Late Gallinazo times, and Middle Gallinazo refuse was incorporated in the fill of the upper levels. Following this, the apparent occupation levels, or dark streaks, have no meaning as successive occupations. All of this does, indeed, suggest that V–251 was a pile for salt-impregnated soil.

V–260.—A mound near the buildings of Carmelo Hacienda on the southern edge of the Gallinazo Group (Quad B–4, southwest). Bennett and I visited this site in 1946. More or less round in outline, we estimated its diameter as about 125 meters and its height as from 1.25 to 1.5 meters above the surrounding pasture lands. Old excavator's pits in the surface revealed no walls or evidence of structures. Shells and sherds cover the surface.

Bennett (1950, p. 61) dates his surface collection from the mound as Late Gallinazo and Huancaco.

V–261.—An earth mound a little north and west of V–260 (Quad B–4, northwest). Measures 100 by 175 meters and varies in height from 1.5 to 4.5 meters. It is surrounded by cultivated fields. Bennett and I made a collection here which he has dated as Late Gallinazo and Huancaco (Bennett, 1950, p. 62).

V–262.—A small earth mound in Quad B–4, northwest. It is near site V–257. The long axis, 27 meters, is oriented north-south; the cross-measurement is 10 meters. Height above fields is about 2 meters. Bennett excavated a pit in this mound down to a depth of 1.5 meters. Contents of the mound were clay, charcoal, and sherds. No constructions were observed.

A small collection from the pit is placed by Bennett (1950, p. 62) as Late, or possibly Middle, Gallinazo.

V–285.—This mound lies out on the northwest periphery of the Gallinazo mounds (Quad B–4, northwest). Rectanguloid in shape, it measures 20 by 12 meters and is 3.2 meters high. The summit is flat; the sides are steep. Its shape suggests that it might be an isolated pyramid, but numerous old excavations show that graves had been opened in the mound without revealing any evidences of adobe construction.

A fair-sized collection from here is placed as Late Gallinazo by Ford.

V–289.—A mound on the Santa Elena-Carmelo road (Quad B–4, southeast). It is 3 meters high, flat-topped, oval in shape, and about 50 by 20 meters in extent. Today it is covered with heavy *monte* growth. In the old *huaquero* holes on the summit I could find no traces of structures or that burials had been discovered. Potsherds were scarce at the site.

Ford dates V–289 as Late Gallinazo.

V–293 (*Carmelo Hacienda, Mound No. 3*).—This is one of the sites which Bennett referred to as "Ca–3" (Bennett, 1939, p. 22). It is situated a little distance south and east of the main buildings at Carmelo (Quad B–5, northeast). It appears as a low (1 meter) mound of earth, 75 by 40 meters in extent. Bennett (1939, p. 22) noted it as "excavation without results."

My surface collection from the site has been dated as Late Gallinazo.

V–307.—A very small earth mound located in Quad C–4, northwest. Total extent is 25 by 28 meters and height is 50 cm. Collier excavated here in 1946 and noted Gallinazo sherds (unplaced as to phase) and intrusive Huancaco burials.

V–308.—Another tiny earth mound in Quad C–4, northwest. It measures only 32 by 20 meters and is 50 cm. high. Collier also excavated this one in 1946, noting Gallinazo sherds (unplaced as to phase) and intrusive Huancaco burials.

V–272, V–302, V–306, V–309.—All of these mounds are in a close group in Quad C–4, northwest. (Mounds 307 and 308 are also nearby.) All of the sites were begun, as either habitation sites, earth-*salitre* piles, or both, during the Guañape Period (see pp. 53–55). V–272 has Gallinazo refuse (unplaced as to phase) and Gallinazo burials in the upper levels. V–302 shows Gallinazo (unplaced) refuse. V–306 has Early Gallinazo strata. And V–309 has either full period or unplaced Gallinazo material.

CASTILLO FORTIFICATION COMPLEXES

Explanatory note.—The castillos are among the most impressive sites in Virú Valley. They are located on either rocky spurs, jutting out into the Valley from the bordering mountains, or upon some of the high isolated hills that rise above the Valley floor. In profile they appear as castles; hence their name. The total structural complex is always topped with a rectangular platform of adobes. These platforms, often terraced, give the effect at a distance of a watch tower or a strongly fortified keep. It is true that upon closer inspection they are not so massive as they appear to be from below. Their builders had capitalized upon the natural terrain to give them a feeling of grandeur. I would not, however, agree with Kroeber (1930, pp. 77–78) who felt that at least one of them (the Castillo de Tomaval, V–51) is too small or insignificant to have served as a fortress, being simply a pyramid or huaca set upon a high natural eminence. As they are described below in detail it will be seen that most of them still are, or were, surrounded by walls; and these walls encompass a fair-sized area in which a sizable garrison could have been maneuvered. Moreover, there are other structures within the enclosing walls in addition to the adobe platforms. Some of these latter are buildings or rooms which could have housed soldiers or refugees.

The fact that they were fortifications does not deny that they were also huacas, temples, shrines, or, in some cases, perhaps palaces. In the Puerto Moorin Period it will be remembered that large rock-walled enclosures on hilltops appeared to have served as fortified redoubts, but inside these enclosures there were small flat-topped pyramids made of earth and rocks and there were also dwelling sites. Some of the Gallinazo Period castillos follow this same general plan. The principal, and spectacular, difference is, of course, the replacement of the small earth and rock mounds by the much larger adobe platforms and terraced structures.

Seven sites are listed as Gallinazo castillos. Actually, there are only five, as sites V–73, V–74, and V–75 are all parts of a single but complex unit:

V–16
V–51
V–68
V–73
V–74
V–75
V–231

V–16 (*Castillo de San Juan-Northwest*).—The Castillo de San Juan[33] is set upon the top of the high spur that guards the entrance to Queneto quebrada on its north side (Quad E–2, northwest). It is a distinct part of a larger fortification complex of two principal parts. The V–16 part, which we will describe here, is situated upon the summit of the hill spur about 400 meters back from its extremity. On this extremity, lying south and east of V–16, is V–62, the other major part of the San Juan Castillo which we will refer to again as "Castillo de San Juan-Southeast" (see pp. 224–225). As V–16 dates principally from the Gallinazo Period it is treated here. V–62, however, seems to be a Huancaco Period structure.

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[33] Bennett (1939, p. 21) refers to this site as the "San Juan fortress."

As seen on figure 23, V–16 is encompassed in a rock-walled enclosure (pl. 26, *top*) which is almost 200 meters long by about 80 meters in average width. This enclosure embraces the crest of a hill whose elevations range from 210 to 240 meters above sea level. At this point in the Valley, the Valley floor below the spur is between 130 and 140 meters in altitude. Hence the castillo has an elevation advantage of almost 100 meters above the surrounding countryside.

The outer enclosure of V–16 is attached to the structures at V–62 by a massive wall of stone (over 1 meter in width) which runs down the sharp crest of the descending ridge from V–16 to V–62. In some places along this crest the builders of the wall had taken advantage of a natural dike of rock, attaching their artificial wall to it and incorporating it, so to speak, into their general plan. Following along the knife-edge of the ridge, the wall would have served to keep an enemy from crossing over the ridge and surrounding the V–62 unit, shutting it off from the garrison in V–16. Presumably this crest wall was constructed in connection with V–62 as there would be no need for it if this later part of the castillo did not exist.

At the end of the V–16 enclosure, where the crest wall joins it, there is a massive section of the natural dike which leads up to and forms a part of a little, walled, trapezoidal platform. This small walled platform extends, in prow-fashion, out beyond the main limits of the larger enclosure. The enclosure wall is massive as is the crest wall although it seems to be entirely artificial. In some places it is as much as 2 meters wide. This massiveness and width is the result of using large boulders in the construction. The masonry style is still the double-faced cyclopean technique seen commonly in the Valley.

Within the stone-walled enclosure are two prepared areas or sections. The northernmost of these has no constructions but is simply a cleared platform of leveled natural earth and rock. This is at the highest point of the hill spur, and, judging from the superimposed contour lines, lies wholly within or above the 240 meter line. A few large boulders in natural position are the only features on this platform.

The other prepared area within the outer enclosure, at its southern end, is a secondary or inner enclosure. This inner encircling wall is also of stones laid in similar fashion to the outer wall but has been built more carefully and is less than 1 meter wide. The inner enclosure is hexagonal in outline, 65 by 38 meters, and contains the foundations of interior room patterns. These latter are difficult to plot. Along the west side there appears to have been a large room which was about 29 by 8 meters. There is some indication that a wall bisected the hexagon at its point of maximum width although this cannot be traced all the way across the enclosure. The whole southern or lower end of the inner enclosure is filled with refuse which appears to be fairly deep. Potsherds and pulverized shell are scattered over the surface of this part of the site. In the rubbish there are a number of old treasure-hunter holes which probably struck graves. At the northern or upper end of the inner enclosure there is a rectangular platform. It is difficult to tell whether this entire platform or mound was constructed of adobes or whether adobes formed only a crowning wall. The mound is covered on flanks and summit with small rock, and may have been largely constructed of earth and rock rubble. In either case, it is steep and well shaped. It stands perhaps 2 to 3 meters above the immediately surrounding ground level, and the summit is flat and squared. Examining the summit, which measures 19 by 12 meters, I discovered the adobe bricks in a wall along the south edge of the platform. I believe that the wall continued around all four sides, but cannot be completely sure of this. The adobes which I examined were mold-made, rectangular, and cane-marked. Some of them measured 36 by 24 by 14 cm.

We made two collections within the V–16 outer enclosure. Most of these came from the inner enclosure. The larger collection, numbering 993 sherds, dates in the Late Gallinazo Period. A very small, apparently selected, collection of 37 sherds includes both later Huancaco and earlier Puerto Moorin specimens. The evidence is overwhelmingly in favor of a Late Gallinazo dating.

V–51 (*Castillo de Tomaval*).—The Castillo de Tomaval is perhaps the most famous site in the Virú Valley. Kroeber has called it the "boldest ruin on the north coast" (Kroeber, 1930, p. 77).[34] It is seated on a spur tip of the largest hill mass which comes into the Valley from the north (pl. 22) (fig. 32). In fact, the Castillo de Tomaval marks the spot where the open Valley of the lower and middle reaches first narrows as one goes upstream toward the Upper Virú and Huacapongo tributaries (Quad E–2, southwest). In this location the castillo is, indeed, bold and castlelike with its high adobe terraces silhouetted against the skyline.

We have already discussed the dwelling site at V–51 (see pp. 116–118). This large area to the northwest of the castillo proper dates largely from the Gallinazo Period and was probably the living site of many of those who used or maintained the castillo. Besides the castillo proper and the dwelling site area there are other features of V–51 (fig. 32). On the flats below the ridges on which the dwelling site and the castillo are located is a large stone-walled rectangle. Exca-

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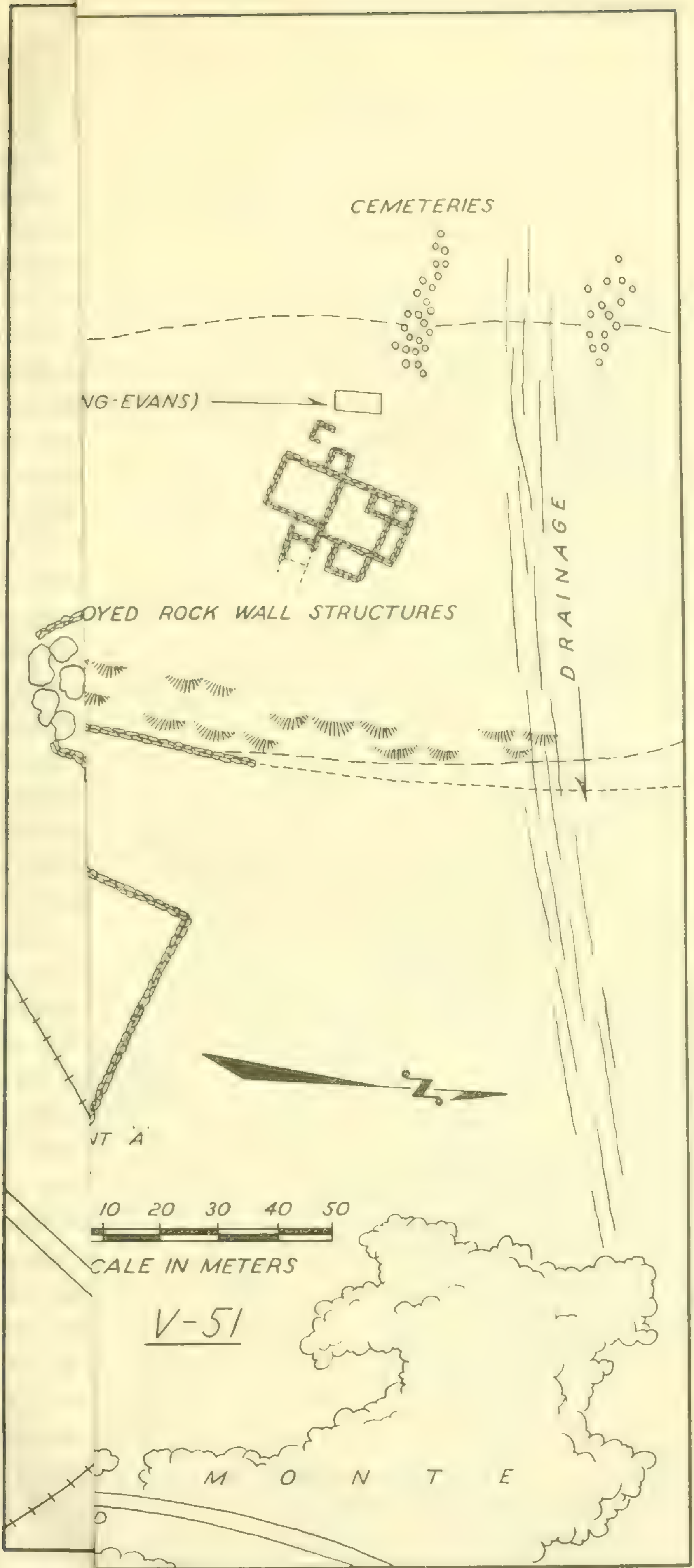
[34] See also Bennett, 1939, p. 21; Larco Hoyle, 1945 b, p. 3, and 1938, map opp. p. 62; and Horkheimer, 1944, pp. 78–79.


CEMETERIES
NG-EVANS)
OYED ROCK WALL STRUCTURES
DRAINAGE
NT A
10 20 30 40 50
CALE IN METERS
V-51
M O N T E
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of rock-walled house foundations nearby.

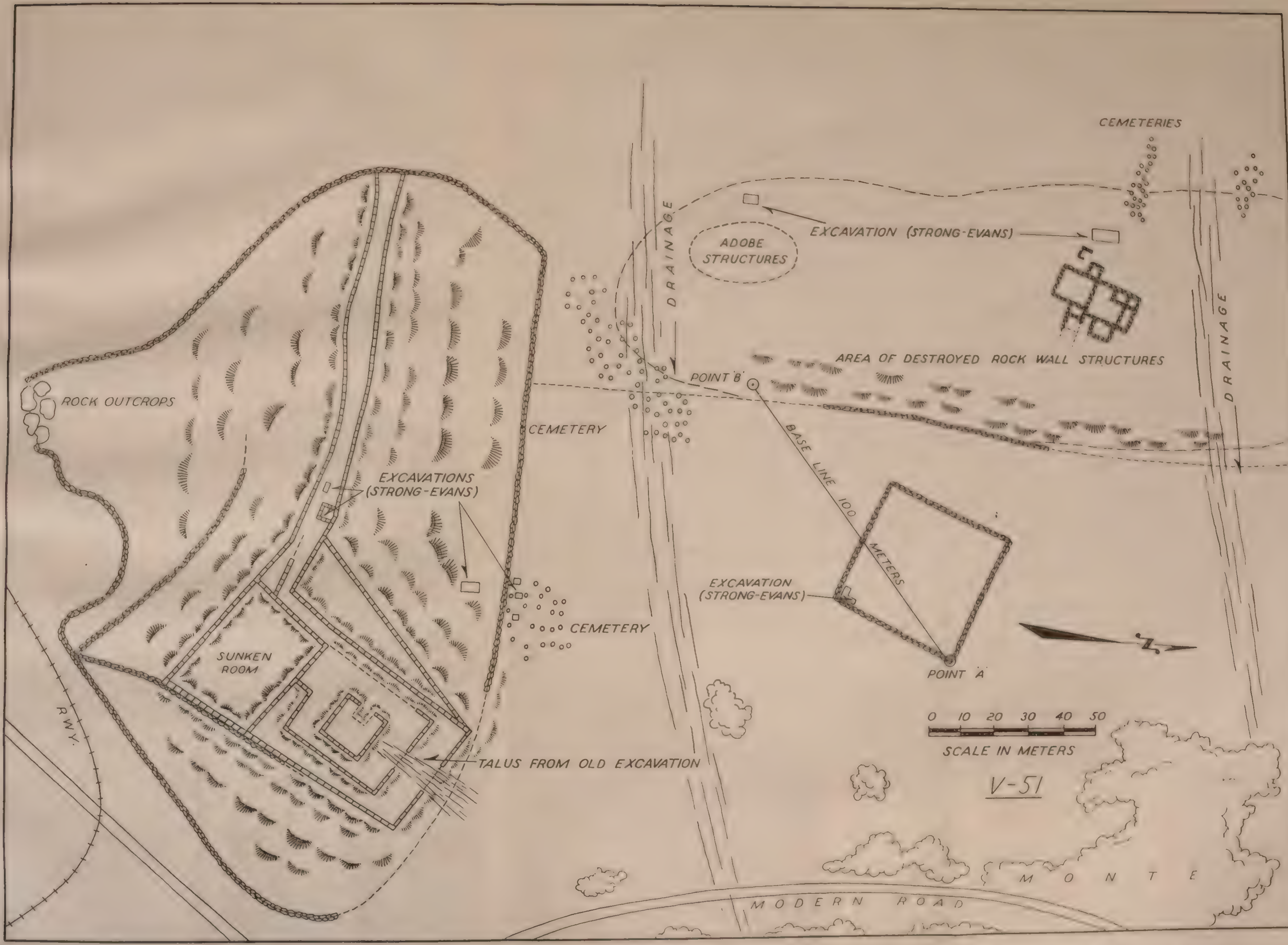

CEMETERIES
EXCAVATION (STRONG-EVANS)
ADOBE STRUCTURES
DRAINAGE
AREA OF DESTROYED ROCK WALL STRUCTURES
POINT B
DRAINAGE
ROCK OUTCROPS
CEMETERY
BASE LINE 100 METERS
EXCAVATIONS (STRONG-EVANS)
EXCAVATION (STRONG-EVANS)
CEMETERY
SUNKEN ROOM
POINT A
0 10 20 30 40 50
SCALE IN METERS
RWY.
TALUS FROM OLD EXCAVATION
V-51
MONTE
MODERN ROAD

FIGURE 32.—Ground plan of the Castillo de Tomaval (V–51). Great adobe terraced pyramid on rocky spur. Village area of rock-walled house foundations nearby. Castillo probably built in Late Gallinazo Period.

vation evidence (Strong and Evans, personal communication, 1946) indicates that this feature was built in Huancaco times, and it will be described in detail with the sites of that period (p. 224). There are also three main cemetery areas at the site. These apparently date from Gallinazo, Huancaco, and Tomaval Periods, but as they are best known for their Huancaco ceramics they will be described, briefly, under that period.

The castillo proper, as stated, is situated on the very end of a natural spur which extends out into the Valley floor. At this point, the line of present-day cultivation is only a little more than 100 meters from the castillo. The modern road runs along the border of the *monte* which fringes the cultivated lands, and a narrow-gauge railroad from Tomaval Hacienda passes within a few meters of the toe of the edifice. The building consists of a steep terraced pyramid of adobes, which is the principal feature (pl. 23, *top*); a large attached building or room of adobes on the southwest side of the pyramid (marked "sunken room" on fig. 32); and a prepared ridge top with adobe constructions which runs from the pyramid westward to the higher and larger hills from which the castillo spur juts (pl. 23, *center*). The entire complex is enclosed within a rock wall constructed in double-faced fashion of large boulders. This encircling wall feature is not noticeable, at first, as it is at the V-16 castillo, because most of it lies down below the hill spur. As the hill spur or ridge upon which the V-51 castillo is located is much smaller than that of V-16, it was apparently necessary to extend the enclosing outer wall to the flats below. The presence of the wall is also obscured by the fact that a large section of it, at the northeast corner, is missing. As this is the place where heavy talus has washed down from an old excavation in the pyramid, it is likely that this part of the wall has been destroyed or buried by adobe detritus. The enclosure is not a perfect oval but is of irregular shape, and on its southern side the builders had taken advantage of some natural rock outcrops to form a part of the wall. At its widest diameters the enclosure measures 220 meters east-west and 140 meters north-south. The walls on the north, south, and east follow along more or less level ground although the north wall has an appreciable west to east descent. On the west side, however, the wall runs up and over the very steep sides and summit of the spur. The point at which the west wall crosses the spur marks the westernmost limit of the prepared ridge-top platform and the adobe construction.

A feature which may be related to the castillo enclosure is a massive stone wall of similar construction which follows along the foot of the hill below the dwelling site area in a more or less north-south direction. At its northern extremity it is tied into another hillspur somewhat similar to the one upon which the castillo is constructed. From this point it runs for about 800 meters, stopping just 85 meters short of joining with the castillo enclosure wall. As this 85-meter stretch (see fig. 32) lies in the path of a drainage wash, it seems quite likely that the two walls did once join and this has since been obliterated by the outwash fan.

Within the castillo enclosure there is another rock wall which begins, or appears to begin, on the south flank of the hillspur and runs in a southeasterly direction until it joins with the enclosure wall. At this juncture it turns abruptly northeastward and eventually connects with the stone foundation wall of the southeast side of the castillo proper (pl. 23, *bottom, right*). This use of stone wall foundations for adobe constructions is common to Virú and will be noted on other castillo-type structures. Kroeber (1930, p. 78), in his description of the Castillo de Tomaval, refers to this stone foundation on the "southern face" of the building (presumably the southeast wall to which we have reference above). To quote:

> The lower half of this face has stone walls among the adobe. None of the stones have been cut; but they are laid with their flat faces flush to form the surface of the wall, which is about as even as the adobe surfaces. In one spot a break shows the interior of these stone walls to be merely rough rubble, and some of them are carried upward with a sudden substitution of adobe for stone, without setback.

I do not know if the stone foundation walls of the castillo are identical in construction to the free-standing wall with which they connect. The outer surface of the foundation wall appears the same, but Kroeber's observation concerning the rough rubble fill suggests that perhaps it was not a double-faced wall but simply a single facing backed with rubble to serve as a retainer for the natural hillside and a base for the adobe tiers above it. Either way, it is likely that similar stone foundations underlie all of the lower adobe walls of the castillo; however, these can no longer be traced without excavation as adobe detritus covers the foot of the structure on all sides.

The terraced pyramid of the castillo rises 36 meters above the flats on the north side of the building. An instrument reading was taken from the station marked "Point A" (fig. 32) at the northeast corner of the stone rectangle. Point A, in turn, is several meters above the cultivated Valley floor so Kroeber's estimate of 50 meters as the height of the southern side is probably about correct. There is no way to be sure, short of excavation, but I would guess that at least half of the total height of the pyramid is due to the natural spur upon which it was placed.

The pyramid is constructed in three major terraces. With Evan's aid, I measured these as best I could although I did not ascend to the summit platform. The lower terrace or quadrangle of the construction is 48 by 37 meters. The orientation of the long axis is northeast-southwest. The superimposed terraces are squared with the basal terrace and follow this same plan of orientation. The middle terrace measures 32 by 27 meters, and the summit terrace or block measures 13 by 14 meters. Each terrace wall rises high and steep with only a slight inclination from the vertical. Of the three, I would estimate that the bottom terrace has the greatest altitude of the three, although this was not checked.

The basal terrace, as can be seen from the map (fig. 32), is on the same level with the ridge platform which extends off to the west. Below this basal terrace, on the northwest side, there is another adobe wall forming an hypotenuse to the right angle made by the juncture of the basal terrace with the ridge platform. Adobe talus has so filled this triangular area that it is impossible to tell if there were once other structures on this lower level.

The middle terrace, as seen on the map, has an L-shaped jog on the southwest side where its retaining wall connects with the wall of the "sunken room." The northwest retaining wall of the middle terrace cannot be traced due to erosion, but it probably followed the course indicated by the dotted line.

The upper terrace appears from below as a rectangular tower or "blockhouse." It is badly eroded, and what may be old rooms can be glimpsed in its uppermost part. These apertures, through which one can see light from the proper angles, may, however, be only the result of erosion of the terrace block.

As the pyramid has suffered from erosion, it is quite possible that there are other terrace levels besides the three which I have described. If these exist, and are covered by adobe outwash, they are probably smaller and subsidiary to the major ones outlined. Erosion of the structure has been advanced by old excavations. There is an enormous one on the northeast front which has cut through the lower and middle terraces and created a great tongue of collapsed and outwashed debris at its foot. Another smaller gash mars the symmetry of the top terrace on its northwest side.

The method of construction of the pyramid has been revealed in these old excavations and washouts and in the general erosion that has taken place on all of its parts. Kroeber's observations on architectural techniques were confirmed by my own. He states (Kroeber, 1930, p. 78):

> All the faces (of the pyramid) slope, but not far from the vertical. The greater part of the hill facing, and all the pyramid proper, are of adobe. The bricks are flat-topped. They are set in columns or walls a few adobes wide. On the north (probably northwest) face there remains part of a large exterior

> sheet only one adobe thick. Near the summit, stakes project horizontally in horizontal rows, and below one of these rows are two or three sticks laid lengthwise in the adobe; the falling of the outer layers has exposed these timbers, which may serve as ties. They are rather light stakes, twisted, apparently pieces of algarrobo.

In 1946 the algarroba stakes to which Kroeber refers were still visible in the same positions (pl. 23, *bottom, left*), and the building method of piling adobes in adjoining columns or walls was everywhere evident (pl. 23, *bottom, right*). The adobe bricks of the pyramid were virtually all cane-marked, rectangular, and made in molds. I noted that the small brick, 33 by 23 by 11 cm., was much the most common. In addition, in the debris around the sides of the pyramid, I noted larger adobes of two sizes: 36 by 29 by 13 cm. and 45 by 45 by 18 cm.

Conjoined to the pyramid on its southwest side, and obviously a part of the same structural complex, is a large room which I have labeled on the map as "sunken room." Actually, it is not sunken, but its floor level approximates that of the natural terrain. In other words, it does not appear to be a platform or raised apron attached to the pyramid but a ground level room. Contrasted to the pyramid it gives the impression of being a deep shaft or hole. Its walls are all high. On the northeast is the pyramid which towers above it and whose lower terrace wall forms that side of the room. The wall of the corridor which connects the lower pyramid terrace to the ridge platform serves as the northwest wall of the room. The southwest and southeast sides are free-standing adobe walls, that on the southeast being underlain by stone. Both of these walls, though partially destroyed, still stand fairly high.

The ridge platform is approximately 115 meters in length and averages less than 10 meters in width. It connects onto a narrow corridor at the southwest corner of the pyramid-"sunken room" complex, and this corridor turns at right angles to lead out onto the lower terrace of the pyramid. The ridge platform was constructed by smoothing the natural crest of the hill spur and by facing it on its two sides with adobe walls. Adobe rooms were built on the ridge or at least on that part of it nearest the pyramid. Strong and Evans cleared a small room in this section (see fig. 32) which was about 3 by 4.5 meters in size. Their work indicated that this was by no means the only room on the ridge. Others adjoined it, and some of those near it were on a higher floor level, implying successive building. Unfortunately, these room arrangements cannot be mapped as the surface of this part of the site presents only the appearance of irregular dried clay, the result of wind and rain erosion. In the room which they cleared Strong and Evans found a hard clay floor, laid over the natural rock of the hill, and clay-plastered interior walls. The construction was made of rectangular cane-marked adobes measuring 31 by 25 by 14 cm. on the average. Stratification in the room was unreliable as it was filled with rubbish from other rooms, but both Late Gallinazo and Huancaco pottery types were found.

Taking all ceramic dating factors into account, the deep Gallinazo refuse of the dwelling area (see pp. 116–118), the pottery found around the castillo complex, and the cemeteries nearby, I would place the castillo complex at V–51 as Late Gallinazo. Huancaco pottery in the uppermost levels of the dwelling area, in the room on the platform ridge, and in the cemeteries undoubtedly indicates some use of the site during the Huancaco Period; but the overwhelming majority of the pottery in the occupation area is Gallinazo. Furthermore, we know that the Gallinazo people were building pyramids or terraced platforms of rectangular cane-marked adobes in the Late Gallinazo phase. This is seen at Gallinazo proper (V–59) and also in the castillo structures of V–16, V–73–74, and V–68.

V–68 (Castillo de Napo).—The Castillo de Napo (Quad E–2, southwest) is one of the principal sites of the valley. Bennett (1939, p. 21) refers to it as "La Gloria"; Larco Hoyle (1938–39, vol. 1, p. 62) used the name "Napu." It is on the south side of the Valley, being a little over a kilometer from the river bed. It is almost directly opposite the Castillo de Tomaval (V–51).

The Napo hill on whose highest crest the castillo is situated is a rocky remnant about 400 meters in diameter and rising above the Valley floor to an estimated height of perhaps 35 meters (pl. 24, *top*). The hill is now completely isolated from Cerro Sarraque by over a kilometer of deep drift sands.

Like V–16 and V–51, the V–68 castillo is surrounded, or nearly surrounded, by a stone wall. In this case the stone wall follows around the edge of the top of the hill on which the main part of the site is located (fig. 33), forming an enclosure of about 75 by 50 meters. It is likely that the north wall of the enclosure extended in an easterly direction for an additional 40 meters (as indicated by the dotted line) to join with another wall which ascends the crest of a subsidiary spur. There are still more walls extending toward the main hill from a small outlying knoll which lies some 250 meters off to the northeast (not included in the map). These probably connected with, or served, the castillo in some defense function, although their partial obliteration due to drift sands has obscured these relationships.

There are two ridge platforms connected with the castillo proper, but neither of these has walls or structures. The larger approaches the castillo from the east and is the easiest means of ascent to the principal enclosure and castillo complex (pl. 24, *bottom*). It is 130 meters long and averages about 6 meters in width. At its eastern ter-

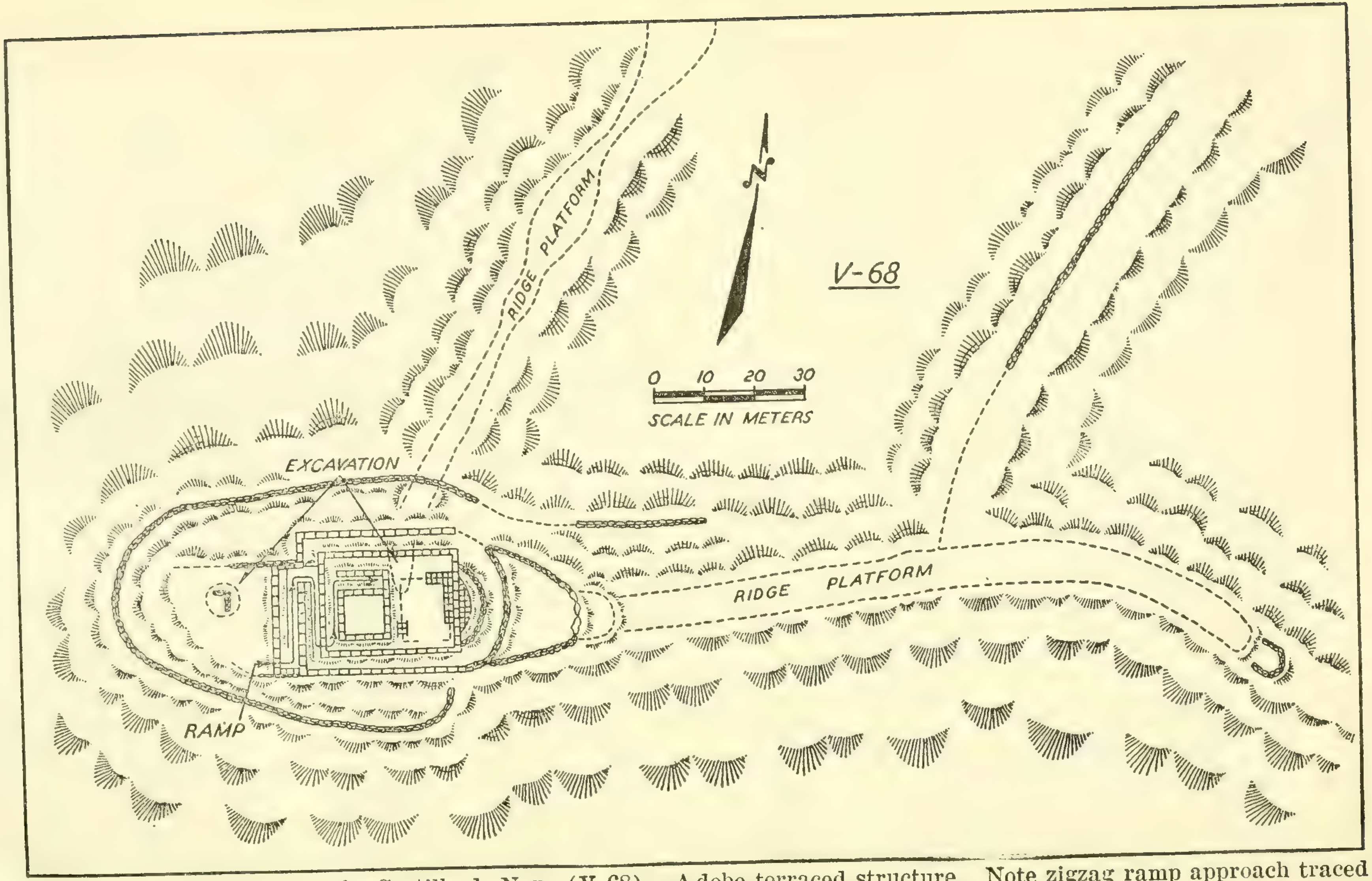

V-68
0 10 20 30
SCALE IN METERS
RIDGE PLATFORM
RIDGE PLATFORM
EXCAVATION
RAMP

FIGURE 33.—Ground plan of the Castillo de Napo (V-68). Adobe terraced structure. Note zigzag ramp approach traced by arrow. Late Gallinazo Period.

minus there is a little U-shaped wall on a level slightly below it which probably served as a defense post blocking the approach to the ridge. The ridge itself is smoothed and presents a steady unbroken incline up to the base of the knoll on which the castillo is situated. I could discern no structures of any sort anywhere on the ridge, but it was very clearly a prepared avenue. On the west it terminates at the foot of a little raised platform which was probably walled. This little platform gives way to a higher, wider platform which is still enclosed by a stone wall. A section of this wall incorporates natural rock outcrops. Two more rounded terraces, each walled with stone, give additional protection to the main part of the castillo before it can be reached from the ridge platform. It is at this point that the outer enclosure walls, both on the north and south sides, curve in toward these little walled terraces; but they are considerably below them on the hill slope and do not ascend to join with the terrace walls. All of the terraces that have been discussed up to this point are of natural soil or earth and represent the cutting or dressing of the hill for constructional purposes rather than actual building.

The second and smaller ridge platform descends from the north side of the main enclosure and follows along a series of connected narrow ridges in a northeasterly direction. It is 115 meters long but much narrower than the east ridge platform, being no more than 2 or 3 meters wide in some places. At its terminus (not completely shown on the map) it expands to a diameter of about 13 meters. I could see no structures of any sort on this platform.

The castillo itself is constructed of rectangular adobes of the cane-marked type (average size 29 by 15 by 10 cm.) which are piled in columnar sections. It is a rectangular structure of three principal levels. Total artificial height is greatest on the west side where it appears to be about 7 meters. Its over-all dimensions, including a ramp structure on the west face, are 37 (east-west) by 28 (north-south) meters. The orientation of the building is only a few degrees off the cardinal points.

The lower terrace, 32 by 28 meters, is on the same level of elevation as one of the rounded, stone-walled terraces which defends the eastern approach (fig. 33). The smaller, inner rounded stone-walled terrace is a little higher than this but is lower than the middle terrace level of the castillo pyramid.

The middle terrace is 27 by 21 meters. Against its east wall, on the outside, and within the uppermost rounded stone-walled terrace, there is a massive bulge or buttressing of adobes. This may be the remains of an earlier structure, or it may have been added to strengthen the terrace wall on its most vulnerable side. On top of the middle terrace, at the east end, are the remains of a very thick-walled adobe room. Foundation evidences indicate that it was about 13 (north-south) by 10 (east-west) meters. This was definitely a room and not another terrace block.

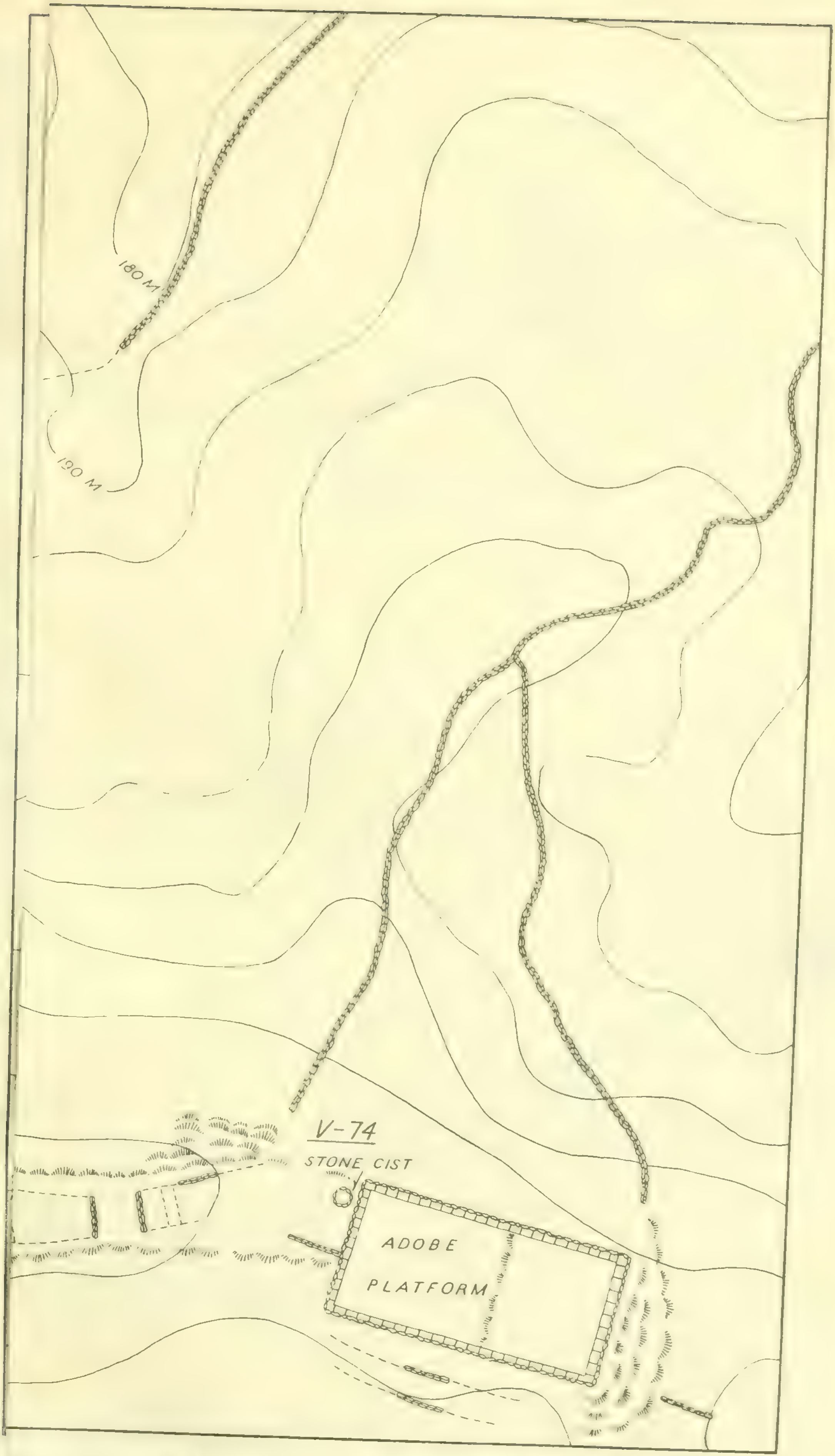
The upper terrace of the castillo pyramid is set at the western end of the middle terrace block. Its over-all dimensions are 14 by 10 meters, but the summit is only 10 by 10 meters as a section on a lower level takes up 4 meters of the northside. It is possible that this 4-meter strip on the north was utilized for the last shuttle of the ramp approach to the summit, although this portion of the building has been damaged by erosion and we cannot be sure.

The west side of the building was undoubtedly the front or the side of official approach. The approach to the summit of the pyramid was accomplished with an elaborate zigzag ramp (pl. 24, *center*). This ramp begins at the southwest corner on a level well below that of the lower terrace (fig. 33). It is enclosed by an adobe wall which forms an additional 5 meter-wide section on the west of the building. The ramp, also made of adobes, slopes up to the north in this section, reaching a doorway which opens onto the level of the lower terrace. The ramp then follows along the lower terrace, going upward to the south and ending at the southwest corner of the middle terrace. The ramp again reverses itself and slopes upward once more to the north until it reaches the entrance leading into the 4-meter-wide northside section of the upper terrace. Probably, the ramp then went eastward in this corridor, finally achieving the summit of the upper terrace; but this last segment of its ascent, as mentioned previously, cannot be traced accurately. Throughout, the ramp itself is considerably narrower than any of the corridors or terraces along which it passes. The latter are from 4 to 5 meters wide whereas the ramp is only about 2 meters wide. The upward ascent was made on a smooth gradient. Steps, if they once existed, had disappeared.

In the small open area below the west front of the pyramid there are some stone-walled foundations, possibly of rooms or houses. A corner of one such room has been disclosed by an old excavation (fig. 33). In this same area it is also noted that stone walls extend out from the foundations of the pyramid on both north and south sides. These can be traced for only a short way, but it is possible that they were attached to the rooms or structures which once existed in the front of the pyramid.

A collection of over 800 sherds from on and around the castillo dates as Late Gallinazo. There is little doubt that the building is of that period and phase.

V–73, *V–74*, *V–75* (*Castillos de Sarraque*).—This group of sites, together with the summit platform area which was listed and described as V–72 (discussed under Puerto Moorin Period, pp. 98–99), make up the Castillo or Castillos de Sarraque, the largest castillo complex


180 M
190 M
V-74
STONE CIST
ADOBE PLATFORM

obe platforms and rooms built over rock-walled foundations together

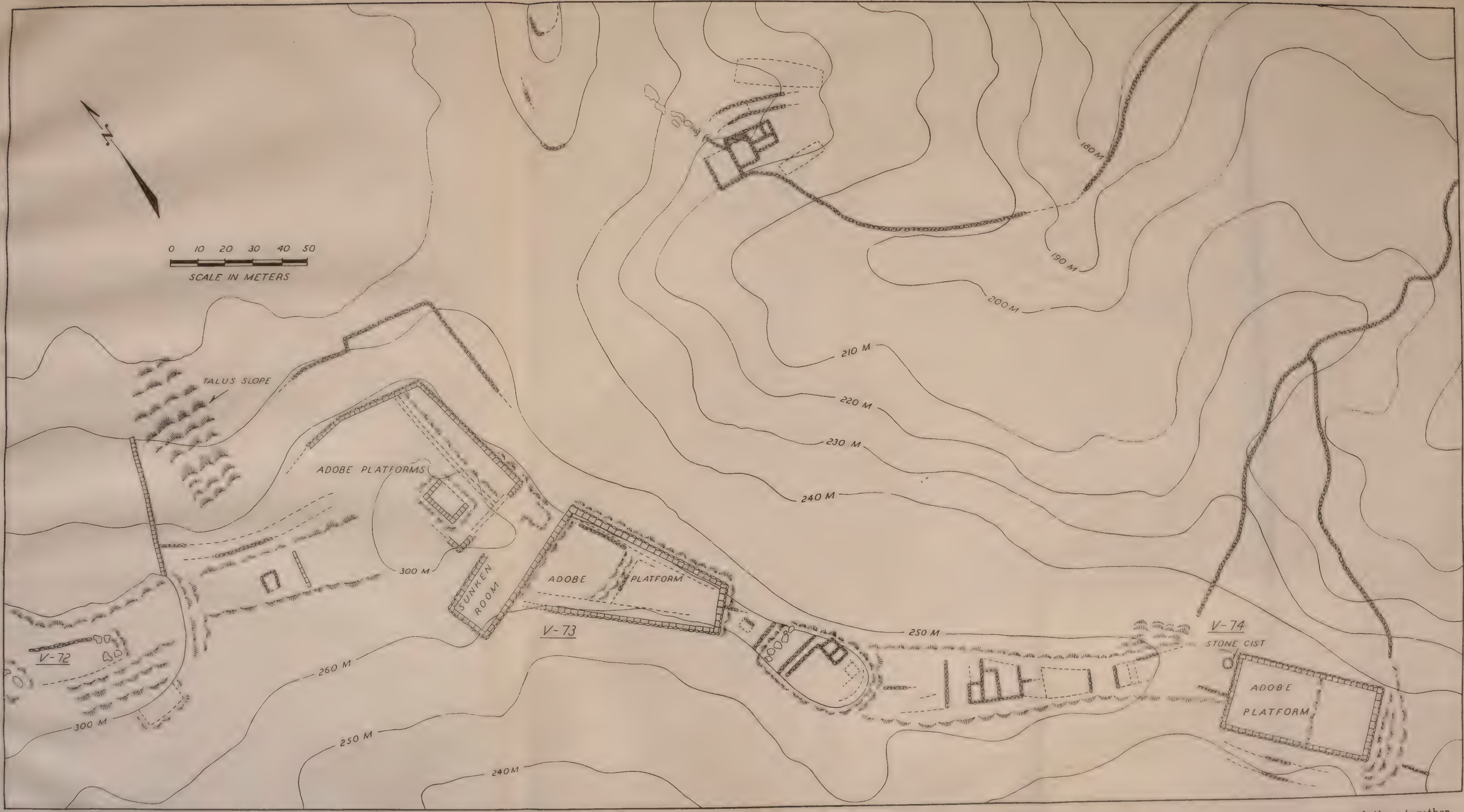

N
0 10 20 30 40 50
SCALE IN METERS
TALUS SLOPE
ADOBE PLATFORMS
300 M
SUNKEN ROOM
ADOBE PLATFORM
V-73
V-72
260 M
300 M
250 M
240M
250 M
V-74
STONE CIST
ADOBE PLATFORM
180 M
190 M
200 M
210 M
220 M
230 M
240 M

FIGURE 34.—Ground plan of the Castillo de Sarraque. Site V–72 is a natural earth and rock crest which has been dressed as a platform. V–73–74 is a complex of adobe platforms and rooms built over rock-walled foundations together with stone house foundations. V–72 dates as Late Puerto Moorin; V–73–74 as Late Gallinazo.

site in Virú.[35] The sites are located on or below the northwesternmost crest of Cerro Sarraque (Quad E-2, northeast) (pl. 25, *top*). From this elevation the Sarraque castillos overlook the entire area of the juncture of Upper Virú and Huacapongo. A little more than a kilometer to the northwest, across the river Valley, is the Castillo de San Juan (V-16 and V-62). Three kilometers to the southwest and south, respectively, are the other two castillos, V-51 (Castillo de Tomaval) and V-68 (Castillo de Napo).

The Sarraque site may be divided into three principal parts (fig. 34). V-73, near the summit of Sarraque ridge, is a series of adobe platforms (pl. 25, *center*, *bottom*) and structures and some subsidiary stone building foundations. V-74 is a detached unit in the same group of hillcrest strongholds, being a large adobe platform of two levels located in a ridge saddle 200 meters southeast of the principal adobe structures of V-73. V-75 is a different type of construction. It consists of two large adobe buildings at the foot of Cerro Sarraque directly below V-73 and V-74. One of these V-75 structures is divided into platforms and a single large room ("sunken room," fig. 35). The other is simply a large terraced platform of two levels. One hundred meters or more to the east of V-75 is the large group of terraced dwellings which have been described as V-76 (p. 114).

The V-73 [36] section of the site crowns the second highest point on Sarraque ridge, the highest being the V-72 platform. V-73 is connected with V-72 by a prepared ridge platform some 70 meters long and 15 to 20 meters wide. An adobe wall extends transversely across this interconnecting ridge platform at its midpoint, and there is a little stone-walled house foundation, 4 by 5 meters, on the V-72 side of the wall.

The principal part of V-73 is composed of two large adobe structures (fig. 34). It is possible that these were once connected across an intervening saddle, but I could not detect the connection in 1946 although the walls of each building come within 5 or 6 meters of each other at one point. The northernmost building occupies higher terrain than the southern.[37] This northern building is, or was, a large rectangular platform walled with adobes. I could not trace the west wall. Either it is destroyed or never existed. East-west dimensions at the south end of the platform are 32 meters. Maximum north-south dimensions, according to my figures, are about 64 meters. The north wall is not at right angles to the east wall but strikes out at an obtuse angle, angles slightly again, and is lost under talus slopes. Three terrace levels are observable within the platform limits. There is a lower level, which perhaps existed only on the east side and is undoubtedly the result of accommodation to the natural slope. The interior wall of this lower level is not visible, but I feel that it must have existed. The width of this lower level terrace is slightly over 10 meters. At the south end of the middle level there is a high, rectangular pyramid, probably constructed entirely of adobes and walled by adobes on three sides of its summit. This topmost level, or tower, measures 13 meters north-south and 8 meters east-west. Its orientation, and that of the total north building, is almost true with the cardinal points.

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[35] *See* Kroeber, 1930, pp. 78-79; Bennett, 1939, p. 21; Larco Hoyle, 1938-39, p. 62, site 18; and Horkheimer, 1944, p. 79.

[36] These buildings compose the "first" structure which Kroeber (1930, pp. 78-79) observed on Sarraque.

[37] The map (fig. 34) shows this crest of the northern building as being partially above the 300 meter contour line. It will be noted, however, that the contour line just below the 300 is 260 meters. These are the readings given on Aerial-photographic map (contour sheet), project No. 104, hoja 33. Servicio Aerofotográfico National del Peru. I am skeptical of the 40 meter contour interval between the 260 meter line and the 300 meter line as shown. There is not, I am sure, 40 meters difference in elevation between the small rectangular walled platform at the top of the northern building of V-73 and the northeastern walls of the same building. The difference, in my estimation, would be nearer 10 meters. It should be remembered that the contour maps which I have used were not made on the ground but solely from air photos.

On the slopes below the adobe platform there is a stone wall which parallels the north and east sides of the building and, presumably, served to defend it. I observed no traces of this stone wall continuing along the east slopes of the ridge although it is possible that it once ran all the way across to connect with the stone wall which comes up the slope near V–74 (see fig. 34). To the west the wall also disappears under a pile of talus. It is very likely that it continued in this direction to join the adobe wall with stone foundation which runs down slope from V–72 just west of the large talus slide. It will be noted that the remains of two stone walls connect at right angles to this last-mentioned wall. It is likely that they were a part of the V–73 north building defense complex. Finally, it should be pointed out that what we are observing in the stone walls may be nothing more than foundations. With so much loose rock lying about the slopes we cannot be sure of this, but the adobe superstructure that still remains on the aforementioned slope wall would imply that it was the only one in which the adobes have not been washed or eroded away.

The south building at V–73 is also a large platform with an orientation several degrees west of north. This placement of the building is undoubtedly dictated by the conformation of the natural ridge. Situated at a somewhat lower elevation, this south platform measures 40 meters at the north end and 17 meters at the south end. Its median length is approximately 65 meters. There are two platform levels, a lower one on the south and a higher on the north. These bisect the building although the northern level covers the greater area as it is considerably wider. There are only scant evidences of summit walls on these platforms, and these are represented by stone foundations as shown on the map (fig. 34). Quite probably the superstructures to these walls were of adobe. Adjoined to the north side of the south building is a large room that I have labeled "sunken room." In appearance it is very similar to the "sunken room" discussed under the V–51 castillo. Its "sunken" appearance derives from the fact that its floor level is on or near the bedrock of the hill and the walls which surround it on three sides are high. Its south wall is, of course, the side of the platform or pyramid as is the case with V–51. The complete shape and size of the "sunken room" was not determinable as I could detect no sign of an east wall.

On the ridge platform to the south and east of the south building there are a number of stone foundations which look like houses or like transverse defense walls which protected the main part of V–73 from approach on the south. These foundations are of various sizes and shapes. Some rooms are as large as 5 by 10 meters, but most of them are too badly battered for accurate mapping.

The V–74 section of the site is an adobe platform[38] which sits astride the lowest saddle of the Sarraque ridge (fig. 34). It is at this point that access to the citadel is easiest from either the Virú proper or Huacapongo sides of the cerro. This platform, with a northwest-southeast orientation, is a perfect rectangle measuring 54 by 27 meters (long axis northeast-southwest). It has a stone foundation wall and is capped with adobes. It is much lower than either of the platforms at V–73. One end, the south, is slightly higher than the other end of the platform.

From its location it is clear that V–74 was built to guard the passes to the ridge from the Valley floor below. Today, the only trails leading up to the summit of the ridge come up, from both northeast and southwest, to converge at V–74. There are no other trails up the Sarraque cerro, at least in the vicinity of the site. It is possible to scale the steep sides of the hill at various points, but this is a slow and difficult undertaking. The trails, on the other hand, are easy to negotiate and the ascent can be made from either side in 10 minutes.

As would be expected, walls also lead up to this key defense position. On the northeast side a wall ascends the slope from Huacapongo Valley to a point a little over halfway up. It forks here with one wall coming in to the north and the other just to the south of the adobe platform. These walls would have split an attacking party coming up toward V–74 and would have enabled the defenders to put up a preliminary battle part way down the slope. There is also another wall on the Huacapongo side slope which comes up from the Valley below farther to the north and east of V–74. This wall swings northward, protecting the ridge, and terminates in a small, unnumbered house group (see fig. 34). On the southwest or Virú side of Sarraque ridge the defensive walls are less formidable. There are two little walls, one above the other, immediately below the V–74 platform, and much farther down the slope sections of other stone wall foundations can be seen. Possibly, more existed than are now visible; however, it is also possible that they did not build them on this side as it is, in general, higher, steeper, and more difficult of ascent than the Huacapongo side. The Valley floor below Sarraque has an elevation of 130 meters above sea level on the Virú side but is 150 meters on the Huacapongo side.

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[38] This may or may not be the second of the two Sarraque ridge structures mentioned by Kroeber (1930, pp. 78–79). Kroeber states that the two buildings are a "full kilometer apart." V–73 is separated from V–74 by only 200–300 meters. There is, however, another structure on the ridge, to the south and east of V–74, which we did not visit. Perhaps this is the second one mentioned by Kroeber.

The height of the platforms or pyramids has been ignored in this discussion because I do not have accurate data on this feature. The V–73 buildings are both very impressive but appear much higher, as artificial buildings, than they actually are. Their lower flanks are anchored well down the slopes on each side of the ridge. For example, the outside wall of the lower terrace of V–73, north building, is well over 10 meters lower than the summit of the top terrace or tower which surmounts the superimposed platforms or pyramid. It is virtually certain that nowhere near all of this height differential is in artificial building. Probably the deepest stacking of pure adobe in V–73 is around 5 or 6 meters. It is certainly not over 10 meters at any point. The V–74 platform has between 2 and 3 meters of artificial construction.

Both V–73 and V–74 are constructed solely of rectangular cane-marked adobes (excepting the stone foundations). At least no other types were observed by us in the 1946 visit. These have an average size of 31 by 24 by 11 cm. I did not see any of the large adobes, any ball adobes, or any tapia construction. Construction is in columnar sections as at V–51. Algarroba poles were used as binders in V–73.

Both V–73 and V–74 date as Late Gallinazo with large, excellently rated, collections.

V–75 is not a castillo in the same sense as V–51, V–68, or V–73–74. As the name, "Palacio de Sarraque" implies, it was probably a palace or temple. Its closest analogue in the Virú Valley is the Huancaco site (V–88–89), a large adobe complex of dwellings, platforms, and pyramids of the Gallinazo and Huancaco Periods (pp. 205–210). Kroeber has pointed out the similarity of Sarraque to the Huaca de La Luna in the Moche Valley (Kroeber, 1930, pp. 78–79). I would agree if he is referring to V–75 or the "Palacio" at Sarraque and not the ridge crest castillos. In all three (Sarraque Palacio, Huancaco, and La Luna) the architectural plan is essentially that of a large adobe platform built against the side of a rocky hill. La Luna (Uhle, 1913; Kroeber, 1925 a) and Huancaco are more complex structures than Sarraque Palacio, as they incorporate more rooms, superimposed pyramids, and other features; but their general appearance is the same. I do not believe that any of the three were, primarily, fortresses.

Palacio de Sarraque is discussed here because of its close association to the Sarraque ridge castillo buildings, all of the buildings forming, it appears, a sort of complex. The function of V–75 was probably similar to those sites discussed under the class of "Pyramid-Dwelling-Construction" sites. There are no true pyramids in V–75, but the adobe platform feature is dominant and adobe-walled rooms are attached to the platforms. These rooms may have served as dwellings although their size and construction suggest that this was a "palace" type dwelling rather than a "common" house.

There are two platform constructions at V–75 (fig. 35). The easternmost is the more elaborate of the two. It has over-all maximum measurements of 48 by 54 meters. On its down slope, or northwestern, side it stands at least 4 meters above the Valley floor. It is divided into three major parts. The southwestern or down-slope section is composed of what appears to be a great "sunken room," 27 by 16 meters. This, like the other "sunken rooms," is not sunken below natural ground level but appears depressed or sunken in comparison to the surrounding platforms. Its floor level, if a room, was approximately on natural ground level. There is the possibility that this "room" may not have been a chamber but is simply the result of deep erosion. In any case, the "room" is flanked by two high, narrow platforms. The flanking platform on the westernmost side is about 5 by 15 meters while that on the eastern side is nearer 8 by 17 meters.

The middle section of this building is a large open platform on which I could see no evidences of dividing walls. It averages about 46 by 20 meters, and may be made of solid adobes. Its surface now appears as eroded clay resulting from melted adobe bricks.

The third and uppermost section of the building is smaller than the others, measuring 41 by 16 meters. It, too, may be largely an adobe mass although there are sections of stone wall foundations noted at two places on its platform top.

The eastern building was constructed on stone wall foundations and these can be traced around a part of the outer walls (see fig. 35). A stone foundation underlying the adobe can also be followed along the wall separating the uppermost from the middle section. Presumably, the stone foundations were used throughout, but probably are covered along some wall faces. The adobes used range in size from 35 by 16 by 13 cm. to 30 by 20 by 10 cm. They are, of course, brick-shaped, and plain rather than cane-marked.

The western building is also a hillside platform, but is less well-preserved than the eastern edifice. Its approximate measurements are 65 by 40 meters, although the outlines of the construction are very vague on the flanks and uphill side. The building was constructed on two terrace levels, and the lower terrace is very narrow, being 5 meters or less in width. The lower terrace wall is of stone. If this wall once had an adobe superstructure, it has been eroded away. The upper terrace wall, along the front of the building, also has a stone foundation; and this one is overlain by rectangular adobes. The adobes in the western building are similar to those in the other V–75 platform. Along one side of the upper terrace level there are many opened grave pits.

On the slope above V–75 are a series of stone walls arranged terrace fashion. As mentioned, these may have served as part of the lower slope defenses for the castillo buildings on the ridge above (V–73 and V–74).

A major prehistoric canal runs along the foot of both V–75 buildings. In some places it has a massive stone wall constructed along its lower side, apparently as a retainer (this wall not shown on map). At both buildings the canal gives the impression of having been built into the platforms or taken into account during their construction. I cannot prove this last conclusively, and it is possible that the canals were excavated after the construction of the buildings. Their general disposition with relation to the platforms does, however, incline me to believe that they were a planned feature in the platform construction.

A collection of 1,652 sherds from this part of the site is dated by Ford as Late Gallinazo. Ford also dates a smaller collection of 242 sherds from the site as Middle and Late Gallinazo. In general I agree with this dating although I would like to remark upon three dating factors which might place the V–75 platforms as belonging to the slightly later Huancaco Period. First, from a crack between the adobes of the outer wall of the eastern building, Evans and I extracted a sherd which is probably Huancaco or Mochica (see pl. 60, *top*, *left*). Secondly, the plain adobe bricks in the Virú Valley are more likely to be Huancaco than Gallinazo. And, thirdly, the hillside platform of adobe, as mentioned above, is characteristic of the Huancaco site in Virú and the Huaca de La Luna in Moche Valley, both Mochica sites. These three factors cast doubt upon Ford's dating, but do not necessarily controvert it. The sherd from the wall construction is a red and white painted relief-modeled piece which could be an early Mochica trade item from the northern valleys, and it might have found its way into Virú in Gallinazo times. As to plain rectangular adobes, they are occasionally found in Late Gallinazo levels at the

Gallinazo site proper (Bennett, 1950). Finally, the adobe platform built against a rocky hillside might have been an architectural feature begun in Virú by the Gallinazo inhabitants.

A Late Gallinazo dating is offered for V–75, but it is put forward with the particular cautions noted.

V–231 (*Virú Viejo*).—On the south side of Middle Virú, just inside the present line of cultivation (Quad E–3, northwest) there is an earth-colored hill 320 by 200 meters in diameter and rising 20 meters or more above the Valley floor to a steep, narrow summit (pl. 26, *center*). Upon examination it can be seen that the Virú Viejo hill is a rock outcrop in an advanced stage of weathering.

On the summit of the hill is the Virú Viejo Castillo. It is the smallest and simplest of any of the adobe castillos of the Gallinazo Period. The castillo is badly eroded, but old *huaquero* holes show that it was made of solidly packed, rectangular, cane-marked adobes. The adobes which I measured averaged 36 by 24 by 18 cm. I also noted occasional rocks mixed at random through the adobe fill.

The castillo is, or was, a terraced pyramid, and the outlines of at least two terrace levels are vaguely visible in the eroded adobe. Stone wall foundations for the basal terrace can be seen in two places (pl. 26, *bottom*). Maximum basal measurements of the pyramid are 32 meters northeast-southwest by 13 meters northwest-southeast. This orientation follows the orientation of the natural hilltop. It is almost impossible to estimate the height of the artificial adobe construction above the natural weathered rock. I doubt, however, if the actual structure was ever more than 4 meters high.

Virú Viejo Castillo dates from Middle rather than Late Gallinazo. As such, it is the earliest of the Gallinazo Period castillos. It is notable that in this castillo we have only the pyramid. The enclosing stone wall, ridge platform approaches, and outlying structures are lacking. This may be because the building antedates the development of the full-blown castillo complex; on the other hand, the Virú Viejo hill is so small and steep that additional features were probably precluded by the terrain situation.

OTHER FORTIFIED SITES

The two remaining fortified sites of the Gallinazo occupation of Virú Valley are of the same types as those described for the preceding Puerto Moorin Period. In fact, one site, V–132 (Cerro del Piño, Quad C–4, southwest) was first built and occupied in Puerto Moorin times. During the Early Gallinazo phase it remained in use or so the ceramic collections from the site would indicate. Afterwards it was deserted. V–132 is of the large hilltop enclosure or redoubt type of fortification. It is described under the section on the Puerto Moorin Period (see pp. 95–97).

The other fortified or protected site is of the second or smaller type noted under the Puerto Moorin Period discussions. This is V–138 (Quad C–4, southeast), a small walled platform on the summit of a crest lying immediately above and to the south of the great site of Huancaco (V–88–89). The site was visited only by Ford, and I am indebted to him for the following description.

The platform of V–138 is a meter or so high and probably is artificially constructed. There are two parts. The higher level, on the west, is semicircular in outline with an approximate diameter of 7 meters. It is walled with double-faced cyclopean stone masonry common to the Valley constructions. Attached to this western or upper platform is a slightly lower one. This second platform level is rectangular in outline, of the same width as the first (7 meters), and about 5 meters in length. It is retained by a wall of rectangular mold-made, plain-surfaced adobes which has been constructed over a stone foundation. Perhaps the stone wall foundation of the higher platform also sustained an adobe superstructure at one time, but there is no evidence of it now. The site is in a strategic "look-out" position and may have been the "look-out" station for V–88–89 during the Gallinazo occupation of that site. V–138 dates as Late Gallinazo.

CEMETERIES

As has been seen in the review of sites of this period, Gallinazo burials were made in midden or occupation sites, in the small earth mounds, in adobe pyramids, and in the various mound and platform complexes. Areas set aside for burials alone, without evidences of other functions or structures, seem to be rare. I have only one recorded in the survey, site V–109 (Quad C–4, southeast).

V–109 was only casually inspected by me, and a collection was gathered by Ford. The collection dates from Middle Gallinazo through the Huancaco Period. The site is situated on the sandy flanks off the southwest corner of Cerro Sausalito. It will be recalled that the small adobe house group, V–131 (see pp. 114–115), a Late Gallinazo Period building, is nearby. Area of graves appears to have been about 75 by 100 meters.

Sr. Enrique Jacobs reports Gallinazo graves having been opened at this location in the past. Jacobs also mentions Huancaco graves, which we verified in our surface collection, and Tomaval Period graves, which we did not.

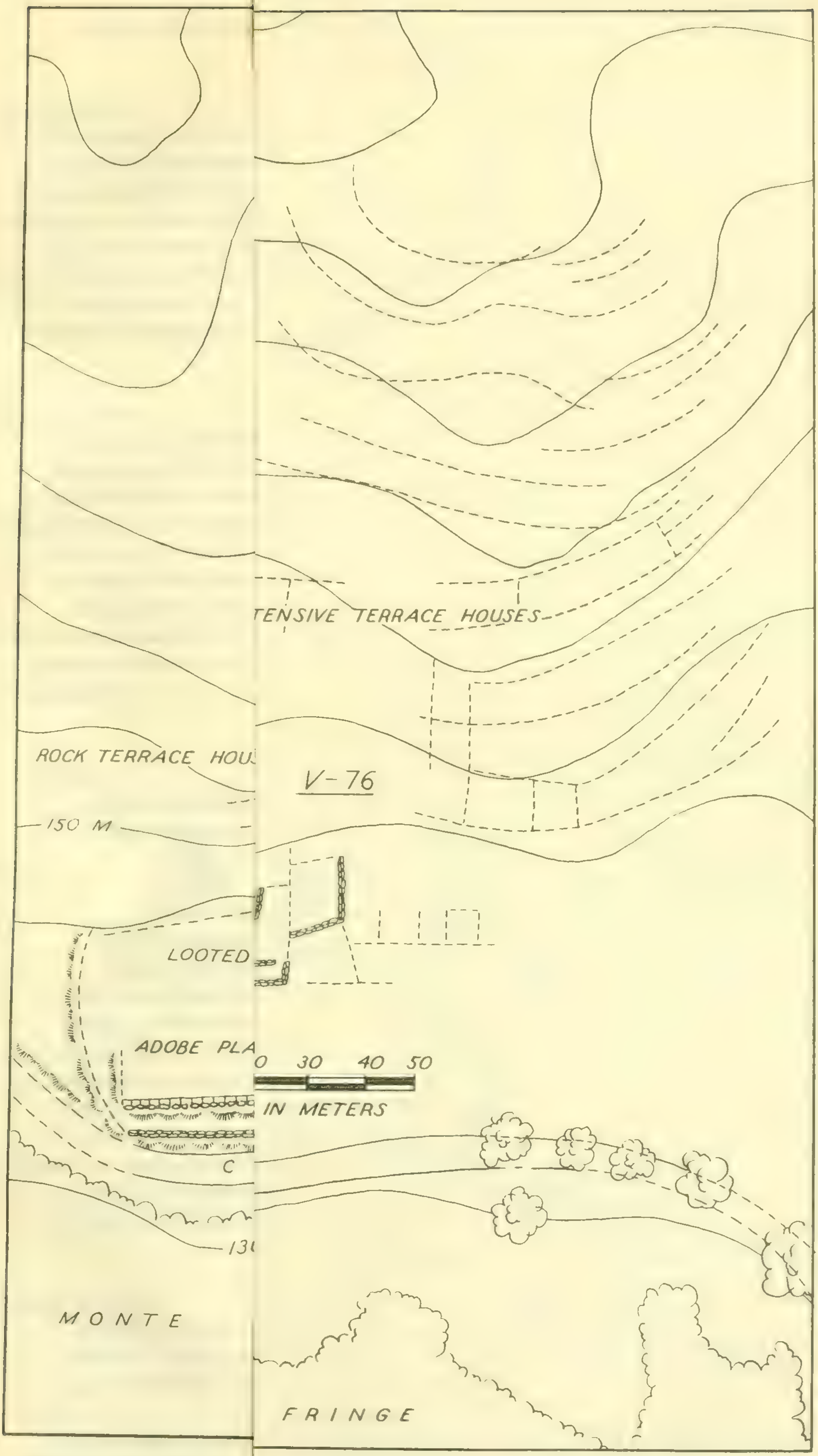
TENSIVE TERRACE HOUSES
ROCK TERRACE HOU
V-76
150 M
LOOTED
ADOBE PLA
0 30 40 50
IN METERS
C
13
MONTE
FRINGE

FIGURE 35.—Groun nd courts on stone-wall foundations. V–76 is a
Late Gallinazo.

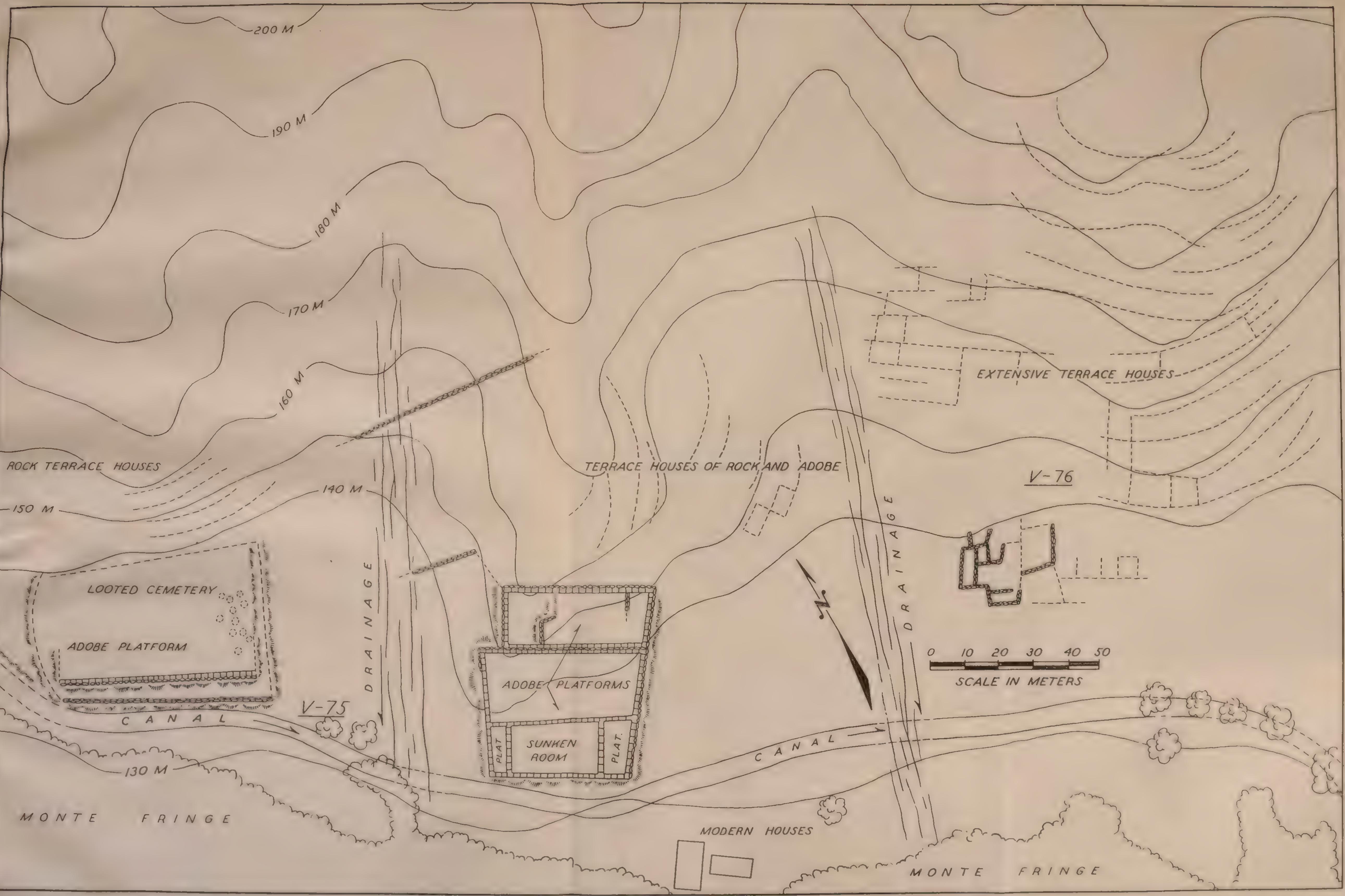
200 M
190 M
180 M
170 M
160 M
150 M
140 M
130 M
ROCK TERRACE HOUSES
TERRACE HOUSES OF ROCK AND ADOBE
EXTENSIVE TERRACE HOUSES
V-76
LOOTED CEMETERY
ADOBE PLATFORM
DRAINAGE
DRAINAGE
V-75
CANAL
CANAL
ADOBE PLATFORMS
SUNKEN ROOM
PLAT.
PLAT.
N
0 10 20 30 40 50
SCALE IN METERS
MODERN HOUSES
MONTE FRINGE
MONTE FRINGE

FIGURE 35.—Ground plan of Palacio de Sarraque (V–75) and Sarraque House Group (V–76). The "Palacio" consists of adobe-walled platforms and courts on stone-wall foundations. V–76 is a group of rock-walled terrace houses. V–75 dates as Middle to Late Gallinazo (possibly as Huancaco?); V–76 as Late Gallinazo.

TABULAR SUMMARY OF SITE TYPES OF THE GALLINAZO PERIOD

Early phase

Living sites:	
Dwelling-Construction Mounds	7
Midden accumulations	1
Earth-Refuse Mounds	1
Community or ceremonial structures:	
Isolated Pyramid Mounds	1
Pyramid-Dwelling-Construction Complexes (the pyramid feature of these sites may not date this early)	3
Fortified strongholds or places of refuge: Hilltop Redoubts	1

Middle phase

Living sites:	
Dwelling-Construction Mounds	10
Midden accumulations	2
Earth-Refuse Mounds	3
Community or ceremonial structures:	
Isolated Pyramid Mounds	2
Pyramid-Dwelling-Construction Complexes (the pyramid feature of these sites may not date this early)	8
Fortified strongholds or places of refuge: Castillo Fortification Complexes (one of these is very doubtful)	2
Cemeteries [39]	1

Late phase

Living sites:	
Exposed Dwelling Sites:	
Agglutinated Villages:	
Irregular Arrangement	4
Regular Arrangement	1
Either Regular or Irregular Arrangement	2
Semi-isolated Large Houses	3
Compound Villages: Rectangular Enclosures	2
Dwelling-Construction Mounds	13
Midden accumulations	8
Earth-Refuse Mounds	9
Community or ceremonial structures:	
Isolated Pyramid Mounds	3
Pyramid-Dwelling-Construction Complexes	12
Fortified strongholds or places of refuge:	
Hilltop Platforms	1
Castillo Fortification Complexes	4

Unplaced as to phase

Living sites:	
Dwelling-Construction Mounds	3
Midden accumulations	5
Earth-Refuse Mounds	5

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[39] Cemeteries as such are rare in Gallinazo. Burials in Dwelling-Construction Mounds, Earth-Refuse Mounds, etc., are more common.

THE HUANCACO PERIOD

PERIOD DEFINITION

The Huancaco Period is estimated as a relatively short time interval in the Virú chronology. Ford, in his time charts (Ford, 1949, figs. 4, 5), allows it only about one-third the duration of a single subperiod or phase of the Gallinazo or Puerto Moorin Periods. Huancaco is not divided into phases as were the previous periods. Its ceramic coefficients are: (1) the increased percentages of Tomaval Plain and Queneto Polished Plain balanced by the decrease in the frequency of Castillo Plain and Gloria Polished Plain; (2) the appearance of Virú Plain; (3) the beginning of the decline of Valle Plain; and (4) the replacement of the decorated negative painted types by a red-and-white positive painted style, Huancaco Decorated (Ford, 1949, pp. 65 ff.). Huancaco Decorated is the painted and modeled pottery so characteristic of the mortuary ware of the Proto-Chimu, Early Chimu, or Mochica culture. The Huancaco Period of the Virú Valley is an extension of this Mochica culture.

SITE DISTRIBUTION

There are 106 sites of the Huancaco Period and these are found in almost every part of the Valley (fig. 36). Huancaco distributions differ from those of the preceding Gallinazo Periods in a more intensive occupation of the Middle Valley and the Huacapongo branch. During the Gallinazo phases, population was confined to the Lower Valley in the Early subperiod; but a few Middle and Late phase sites were found in the Middle Valley, Queneto quebrada, and Huacapongo. This trend toward expansion into the middle and upper portions of the Valley system is suddenly and greatly accelerated in Huancaco.

Where there were 6 or 7 sites of the Middle and Late phases of Gallinazo in the Huacapongo, there are 28 of the Huancaco Period; and in the Middle Valley and Queneto the number of sites has trebled from Late Gallinazo to Huancaco. In the Lower Valley, the only decrease in Huancaco is at the Gallinazo Group. This Gallinazo Period concentration of communities is virtually deserted. Three sites (V–59, V–151–152, and V–155) are all indicated on the map, but it is likely that their Huancaco Period occupation was extremely superficial, perhaps confined only to intrusive burials. Otherwise, there are more Huancaco sites on the north side of the river than there were Late Gallinazo sites. South of the river there are about as many for Huancaco as for the earlier period.

In brief, the Huancacans occupied the whole Valley system. This may have been the first time that this occurred in the human history of Virú. This occupation is moderately dense in all parts, but there

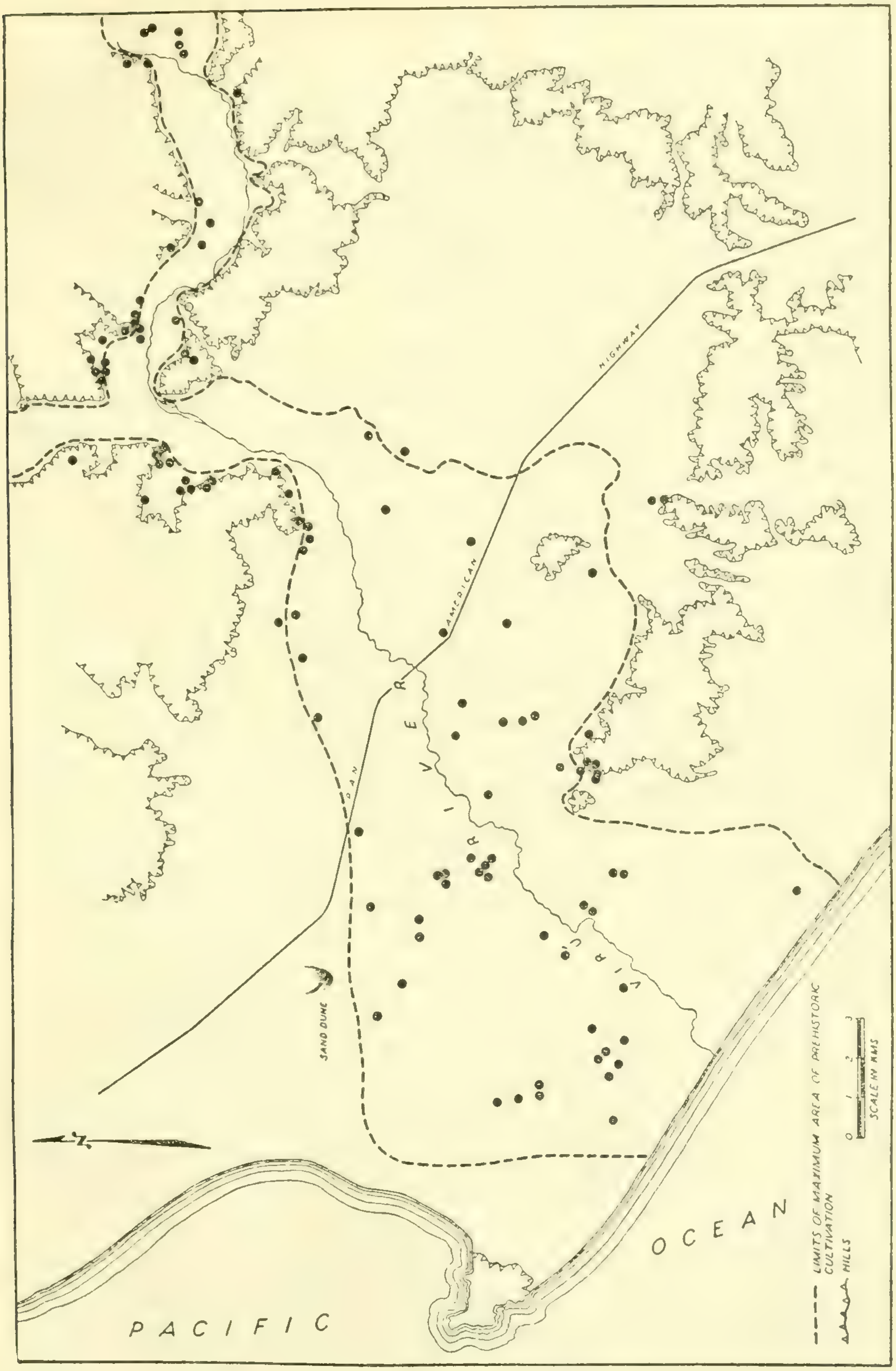
PACIFIC
OCEAN
RIVER VIRU
PAN AMERICAN HIGHWAY
SAND DUNE
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS

FIGURE 36.—Site distribution map of the Huancaco Period.

seems to be no intensive concentration comparable to the Late Gallinazo massing of sites around the Gallinazo Group.

SUMMARY OF SITE TYPES

Huancaco Period site categories and subcategories are similar to the Gallinazo Period. They embrace: (1) living sites (Exposed Dwelling Sites, Additional Occupation Sites, Earth-Refuse Mounds, and Dwelling-Construction Mounds); (2) community or ceremonial structures (Community Buildings, Isolated Pyramids, Pyramid-Dwelling-Construction Complexes); (3) fortified strongholds or places of refuge (Castillo Fortification Complexes); and (4) cemeteries.

The exposed dwelling sites of the Huancaco Period are: (1) Irregular and Regular Agglutinated Villages, (2) Semi-isolated Large Houses, and (3) Rectangular Enclosure compounds. There are 10 sites which may be classed as Irregular Agglutinated Villages. These vary considerably in size, from a site like V–150, which consisted of only a few rooms, to V–192, which, minimally, has 70 rooms or compartments. The total area of a big Irregular Agglutinated Village would be 70 meters or so in diameter. A small site of the same type could be incorporated within an area of 20 meters. Regular Agglutinated Villages are less common, there being only three, and one of these also dates from the Late Gallinazo Period (V–39). V–19 is an L-shaped unit, 60 by 50 meters in extent and containing 15 rooms, most of which are large. V–14, the other Regular Agglutinated group, extends over an area at least 110 by 70 meters. This site has a bilateral, although not perfect, symmetry. There is a large room or courtyard at one end in the center, and smaller rooms seem to be balanced around this.

There are five sites with Semi-isolated Large Houses. Two of these sites, V–41 and V–102, also have Irregular Agglutinated units, and the large houses are found near the clusters. Site V–113 is a group of three Semi-isolated Large Houses, each about 15 meters distant from the others. V–178 and V–42 stand alone with no other dwellings in the immediate vicinity. The Semi-isolated Large House of this period does not differ significantly from those of the preceding Gallinazo Period.

There is one definite Compound Village site of the Rectangular Enclosure subtype. This is V–10, an enclosure 90 by 40 meters with a large courtyard area and the smaller room divisions at opposite ends of the rectangle. Sites V–143 and V–110 may be Compound units of the Rectangular Enclosure sort, but destruction of portions of the walls makes the identification less secure.

The Exposed Dwelling Sites are revealed, almost entirely, in foundations in double-faced stone masonry; but it is evident that adobes were used in some of these buildings. Rectangular adobes, probably plain, were seen in V–10, and cane-marked rectangular adobes were in V–180.

The open midden sites of the Huancaco Period, which we could isolate as pure, or nearly pure, were mostly less than 100 meters in diameter. An exception is the great midden of V–90 and V–91, sites which are associated with the Pyramid-Dwelling-Construction Complex V–88–89. These middens cover an area 300 to 400 meters across, but they appear to be extremely superficial. The V–90–91 midden was probably enclosed in a system of adobe walls, undoubtedly dating from the Huancaco Period.

The Dwelling-Construction Mounds which date solely from the Huancaco Period range from about 20 meters in diameter up to one which is 200 by 80 meters. Height varies from 3.5 to 7 meters. Three of them have plain rectangular adobes, which fits the adobe developmental picture as we know it, and one, puzzlingly, seems to contain tapia adobe structures. There are not nearly so many Dwelling-Construction Mounds dating from this period as from Gallinazo, and several of those with Huancaco ceramic components have earlier Gallinazo levels.

Earth-refuse mounds are almost as common as during Gallinazo, but most of these were started in earlier periods. They are smaller than the Dwelling-Construction Mounds, ranging between 20 and 30 meters in diameter and from 1 to 2.5 meters in height.

There are three large, stone-walled, empty rectangles which appear to date from the Huancaco Period and which are called "Community Buildings." The walls are 1 meter wide, on the average, and are made of double-faced, cyclopean masonry. The rectangles, in no case absolutely perfect, vary from 38 meters square to 52 by 37 meters. In one of them, there are faint traces of smaller rooms along the interior wall of one side, but there are no other signs of interior partitions. Their size and the absence of interior rooms suggest the community buildings or rectangles of the Guañape Period.

The Isolated Pyramid Mounds which date solely from the Huancaco Period are more common in the Lower Valley and are made of adobe. These seem to be about equally divided between cane-marked and plain rectangular adobes, although in two mounds both cane-marked adobes and tapia were observed. One of the latter has a base of tapia and a superstructure of cane-marked adobes. This is a stratification reminiscent of some of the Gallinazo mounds, and it may be that the lower portions of this structure were made in that period. The basal size of these mounds varies from 20 meters square to 100 by 75 meters, and height ranges from 2 to 6.5 meters. In addition to square and rectangular mounds, there is one with a circular outline. In the Huacapongo drainage there are a good many earth-rock Pyramid Mounds which have double ceramic components of Puerto Moorin and Huancaco Periods. These are comparable in size and shape to the Huancaco adobe mounds of the lower part of the Valley, although some of them have attached extensive wall features. There are also two earth-rock mounds of the upper drainages which have pure Huancaco dates. One of these is a sizable circular mound with a ramp, and the other is a small, low, rectangular platform.

The Pyramid-Dwelling-Construction Complex of the Huancaco Period is closely related to that of Late Gallinazo. The outstanding Pyramid-Dwelling-Construction Complexes of Gallinazo, V–59, V–152–153, and V–155, were occupied only superficially in the Huancaco Period, and no significant structural modifications were made. Their closest Huancaco counterpart seems to be the big site Huaca Verde (V–280). This is an adobe mass, 300 by 200 meters in extent, which rises on the average of 4 meters above the surrounding cultivated fields of Lower Virú-North. The site has several Pyramid Mounds, made of rectangular adobes, built upon a common platform. Excavation will demonstrate, for certain, whether or not the underlying and surrounding platforms contain superimposed Agglutinated Village units of adobe. Site V–166 is another Huancaco Period Pyramid-Dwelling-Construction Complex. It differs from Huaca Verde, or from the Gallinazo sites of the V–59 type, in being a single Pyramid Mound of adobes to which is attached a low platform made of conjoined adobe-walled rooms. This variation, the big mound with the relatively small dwelling agglutination connected to it at its base, is also a Late Gallinazo feature seen in such Pyramid-Dwelling-Construction Complexes as V–77, V–239, or V–240. Site V–149, dated as Huancaco, presents another variant. The large mound with a small section of conjoined rooms forms the center of the site. Attached to the mound are walled enclosures, a hundred meters or so in extent. These enclosures are largely empty of any structures.

This variation of large, empty enclosures attached to mounds is one of the outstanding differences between Gallinazo and Huancaco sites of this general type. It is seen best in the big Huancaco site, proper, V–88–89. The V–88–89 Pyramid-Dwelling-Construction Complex has other unusual features in addition to the attached enclosures. The site, which is constructed of small, plain rectangular adobes, is built against the hill slopes of Lower Virú-South. This terrain situation is not quite as favorable for defense as that of the typical Castillo Fortification Complexes, but it is considerably more secure in this regard than the Pyramid-Dwelling-Construction Complexes on the Valley flats. This terrain position has been augmented by the nature of the construction. Architecturally, the mass of V–88–89 is a series of connected platforms. On their Valley side, these platforms have high sheer walls while against the hill they simply abut onto the natural rock. Walls running up the hill-slopes afforded protection against attackers moving along that side of the site. The only other similar structures in the Valley are the two platforms at the foot of the Cerro Sarraque.[40] Upon, or conjoined with, these platforms is a sizable Pyramid Mound. This mound is 54 by 42 meters at the base, 7 meters high, and built in five terrace levels. Its impressive height of 7 meters overlooks the Valley floor. On the opposite side the pyramid is joined to a complex of room constructions which are built on a platform at least half as high as the mound. Elsewhere on the platforms there are room or compartment divisions. These are not the tiny, criblike rooms of the Gallinazo house clusters but large, open courts, corridors, and the like. In other words, the room constructions of V–88–89 suggest palace precincts rather than common dwellings. West-southwest of the V–88–89 main structures are the areas designated as V–91 and V–90. V–91 consists of large, adobe-walled courtyards attached to the platform nucleus of V–88–89. The walls are made of the same plain rectangular adobes as the main site, and still stand as much as 2.5 meters high. Three hundred meters distant, upon a broad, low hill are the similar adobe walls surveyed as site V–90. This was probably a great rectangle several hundred meters in extent, which has been partially destroyed or covered with sand. Although intervening connections are not visible, it is possible that the V–90 enclosure once was tied into the V–91 walled courtyards, forming a vast complex all of which was related to V–88–89.

There are only three Castillo Fortification Complexes which date from the Huancaco Period alone. These are V–62, V–67, and V–130. V–62 and V–67 are characterized by cane-marked rectangular adobes while V–130 is made of plain rectangular adobes.

Huancaco Period cemeteries are well known and favorite looting grounds for the *huaqueros*. This aided us in our site survey; and we were able to locate 11 pure and 12 mixed cemeteries of the period. They are usually in the sandy slopes of the Valley margins. Their size varies from 15 to 400 meters in extent. On only one of them, V–99, was there any special surface feature. This was a small knoll about 35 meters in diameter and 2 meters high. The knoll was sand-covered, but the numerous graves which had been opened in it were adobe-lined. It is possible that this was a dwelling-construction or even a low platform mound that had been used as a cemetery. Several of the Huancaco cemeteries were littered with plain, rectangular adobes taken from the graves. In other cemeteries, however, the graves were simple, unlined pits. There are also Huancaco Period burials in dwelling sites of earlier periods, particularly in the Dwelling-Construction Mounds. V–162, where Strong and Evans found an elaborate burial accompanied by Huancaco (Mochica style) Period grave goods, is an example of this (pp. 123–124).

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[40] Cerro Sarraque (V–73, V–74, V–75), has been described as a Castillo Fortification Complex of the Late Gallinazo Period; however, it is possible that the platforms in question (the V–75 section of the site) date as Huancaco (pp. 172–175).

EXPOSED DWELLING SITES

Explanatory note.—These are sites with structural remains that appear to have been dwellings. They are not immediately attached to mounds or larger, unusual buildings. As with the open dwelling sites of the Gallinazo Period, most of them are found in the Upper and Middle Valley where stone was used as foundation material for houses. Functionally comparable sites probably are seen in the Lower Valley in the Dwelling-Construction and Earth-Refuse Mounds.

There are 20 such sites. The following nine have no other ceramic component in association except that of the Huancaco Period:

V–10
V–19
V–41
V–42
V–53
V–113
V–178
V–181
V–192

Seven other sites have mixed ceramic components, but it is probable that the structures found on them date from Huancaco times. These are:

V–14
V–30
V–32
V–102
V–110
V–150
V–228

There are also four sites which show other ceramic components in addition to Huancaco material and whose structural remains may or may not belong to the Huancaco Period. These are:

V–39
V–51
V–143
V–180

V–10.—Site V–10 is inconspicuous, being situated next to thick *monte* hedges which border the cultivated land of Middle Virú-North (Quad D–2, southeast). A few hundred meters to the east is the midden and cemetery site of V–11 which was in use during the Huancaco Period and may have been the cemetery site for V–10. A short distance to the south are the three large earth, rock, and adobe mounds, V–298, V–299, and V–300. These mounds appear to date from the Tomaval Period, however.

V–10 is now revealed by rock-foundation walls. These walls are now less than 1 meter high, and the relative scarcity of stone around the site suggests that the upper portions of the walls may have been made of adobes. The site is enclosed in a Rectangular Enclosure Compound 90 meters east-west and averaging 40 meters north-south (fig. 37). The orientation of the enclosure is in almost perfect alinement with the cardinal points. Gateways or doorways were not detected. It is possible that the aperture on the north-central side was an entrance and not a break in the wall. It is also possible that doorways were set high in the walls and, therefore, do not show in what appears to be continuous wall foundation. Walls of the enclosure and the interior rooms vary from 80 to 50 cm. in thickness with the enclosure wall being the thicker. Masonry technique is that of the double-faced, cyclopean type, and the stones used are rather large water-worn boulders. Mud mortar was used.

The interior rooms are not well preserved, and may once have been more numerous. At the west end of the site there is a large room which was probably divided into smaller ones although the wall partitions here are now pretty well jumbled together. In the central part of the enclosure there is a cluster of 4 or 5 rooms. The largest of these is 7 by 5 meters and the smallest are 4 by less than 2 meters. On the south-central side there is a curious large room, 20 by 12 meters, which encloses an interior stone-walled rectangle. This interior rectangle is 14 by 5 meters. The entire eastern section of the enclosure is largely without interior wall constructions and may have been a great courtyard.

There are a couple of old excavation holes in the site, and the easternmost of these disclosed a very interesting stratification, obviously artificial. This is strange as the site does not give the appearance of having been built up, seemingly being on a level with the surrounding country. However, the upper 75 cm. of this excavation profile proved to be tightly packed or placed rectangular adobes. These were resting upon a single course of water-worn but purposefully placed boulders. Under the boulders was a second layer of rectangular adobes, also about 75 cm. in thickness. This was again underlaid by several courses of grey stone boulders. Beneath these bottom boulders was over 1.5 meters of conglomeritic soil, probably natural wash from the nearby hills. This cross section indicates the building of platforms, for some purpose, in this part of the site. These may have been part of the Huancaco construction, or they may be earlier. The small rectangular adobes would, however, imply that these now-buried platforms were no earlier than Late Gallinazo and may very well have been Huancaco.

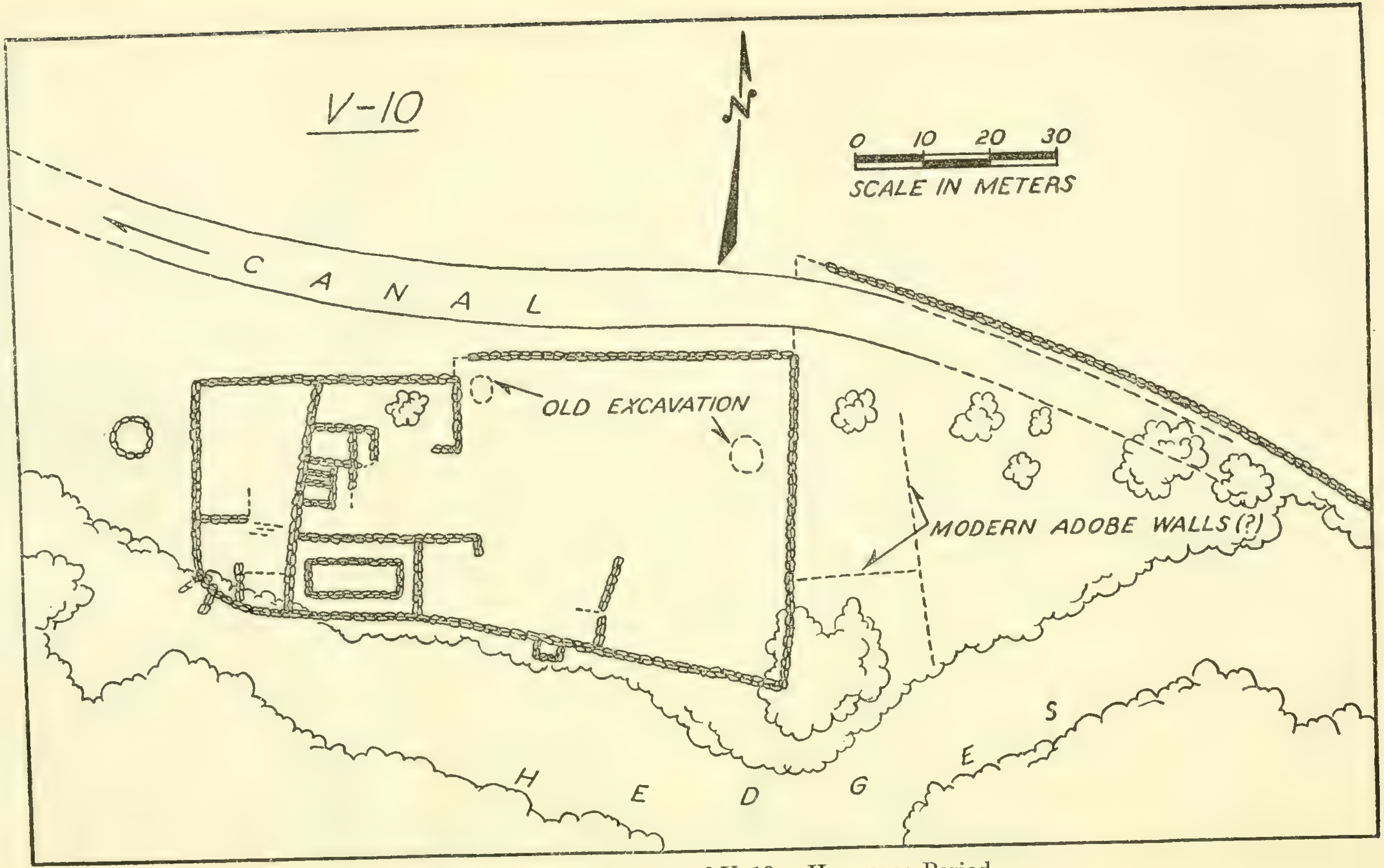

V-10
N
0 10 20 30
SCALE IN METERS
CANAL
OLD EXCAVATION
MODERN ADOBE WALLS (?)
HEDGES

FIGURE 37.—Ground plan of V–10. Huancaco Period.

Outside of the enclosure there is a circle of stones arranged in single file. This circle measures 9 meters in diameter.

Along the northern edge of the enclosure flows the principal prehistoric canal of the north side of the Valley (pl. 53, *top*). Along the north or up-slope bank of the canal there is a thick (1 meter wide) stone wall which extends for about 130 meters eastward along the canal and then turns abruptly to run up the crest of a rocky foothill. (This last-mentioned section of the wall is not shown in fig. 37). This wall must have had a defensive purpose and was probably built in conjunction with the V–10 site to keep attackers who were moving up or down Valley from surrounding the settlement.

The only other features in connection with V–10 are some adobe walls (probably tapia adobe) in the area at the east end of the site enclosure. The walls may be modern.

The dating on V–10 is weak. Only 22 sherds were found on the surface, and Ford places these as Huancaco.

V–19 (*El Corral*).—El Corral is a section of Huacapongo-North near the gate where the modern road passes from the present cultivated valley into the rocky outwash plain of the Cerro Niño and adjoining hills. V–19 is the largest or best preserved of the rock-walled house groups in the vicinity and sometimes is referred to as "El Corral." It is not over 100 meters from present-day cultivated fields and sits only a few meters back of the brow of an old river terrace (see Quad E–1, southeast).

The site appears to have been built as a Regular Agglutinated unit as most of the rooms show near-perfect wall alinement with adjoining rooms (pl. 47, *top*, *right*). It is a symmetrical L-shape, rather than a rectangle (map, fig. 38), the orientation of its longer axis is northeast-southwest, and the constructions would appear to have been laid out to "square with" the immediate terrain rather than with the cardinal points. The longer axis is 62 meters, the shorter 48 meters.

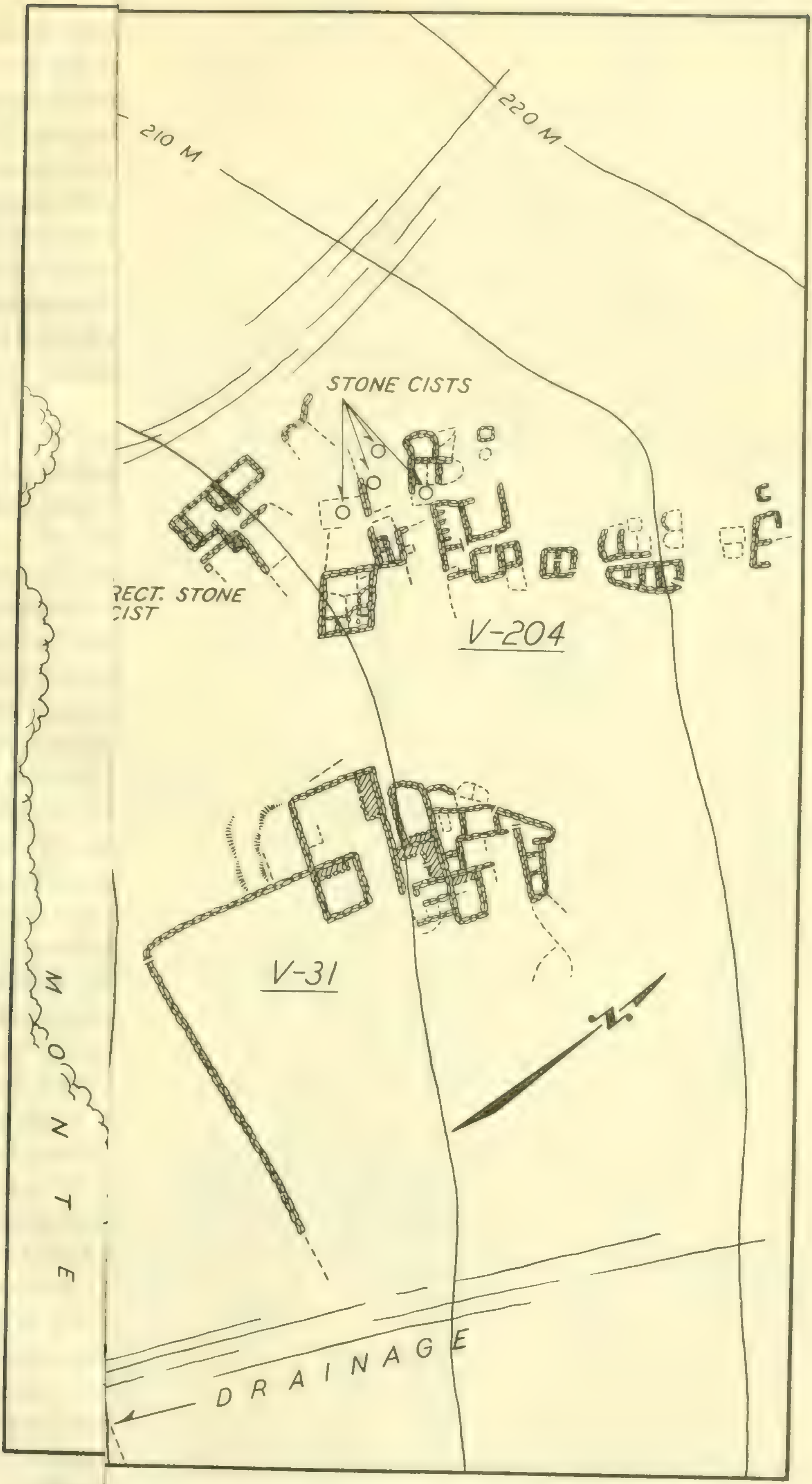
There are about 15 rooms. Most of these are large. A series of four rooms, strung along one side of the group, averages better than 10 meters in width and about 15 meters in length. Two other rooms are approximately this same size. The largest room is 22 by 14 meters and has no interior features now in evidence. What appear to be three small rooms subdivide a gallery 5 meters wide, and inside of one of these small subdivisions there is a corner room 3 by 2 meters. Two large rooms on the southeast side are 18 by 13 and 15 by 15 meters, respectively, although one of these may have been subdivided into two major parts. One section of the latter has a large, U-shaped banquette feature, some 4 meters wide and 30 to 50 cm. high. This banquette is faced on the inside with a single row of stones. There is another raised platform, or rectangular banquette, 4 by 4 meters square, in the corner of the other of the large southeast rooms. The third banquette in the site is in one of the three small gallery rooms mentioned above. It is placed right-angle fashion along two sides of the room; is less than 1 meter wide; and is composed solidly of carefully laid stones. The larger banquettes are, except for their facings, of earth. Doorways, 60 to 80 cm. wide, are noted in several instances between rooms; and, in one case, there is a doorway in an outside wall.

Throughout, the rock-wall foundations are about 80 cm. in width, on an average, and they are constructed of unworked stone set in mortar in the usual double-faced arrangement. In some places the walls of V–19 are still a meter or so high. Loose rock is so abundant in the area surrounding the house group that it is quite possible that the walls were made entirely of rock and mud with no adobe superstructure.

Immediately in back, or up slope, of V–19 is a large wall which runs in a general east-west direction along the outwash plain of Huacapongo-North. The base of the wall appears to have been aboriginal, but it has been added to, pirca-fashion, in modern times in order that it could serve as a corral wall for livestock. Fifty meters east and south of V–19 there is another group of rooms, some of which have been built over very obviously to use as cattle or horse pens. This group was not included in the V–19 site and is unnumbered in our survey although it may be seen on the map (fig. 38). North of V–19, and just below the wall, is a pile of small loose rock about 3 meters high and 20 meters in diameter. This rock pile may be nothing more than a heap of stones that were once cleared from no longer discernible cultivation plots. It is also possible that it may have had a defensive function in connection with the wall mentioned or with another wall, a section of which crosses the first wall near the rock pile.

A collection of over 100 sherds from V–19 has been placed as Huancaco Period, and there is no other ceramic component on the surface of the site. The walls and rock pile do not necessarily date from this period, but, as will be discussed further on, these features most likely date from either the Huancaco or Tomaval occupation of the Valley.

V–41.—This site is in the southwest corner of Queneto quebrada (Quad E–2, northwest). It is built on the rocky flood plain and consists of the low remnants of double-faced stone walls. There are two parts to the site as it exists today. One of these is an Irregular Agglutinated group of badly battered rooms covering an area about 30 meters in diameter. The only one of these rooms which still has a complete foundation measures (average) 7 by 7 meters. Apparently detached from this group of conjoined rooms is a Semi-isolated Large House, 12 by 12 meters. This building is not quite square (fig. 22)


210 M
220 M
STONE CISTS
RECT. STONE
CIST
V-204
V-31
N
M O N T E
D R A I N A G E

FIGU ems to show building patterns of both Puerto Moorin and

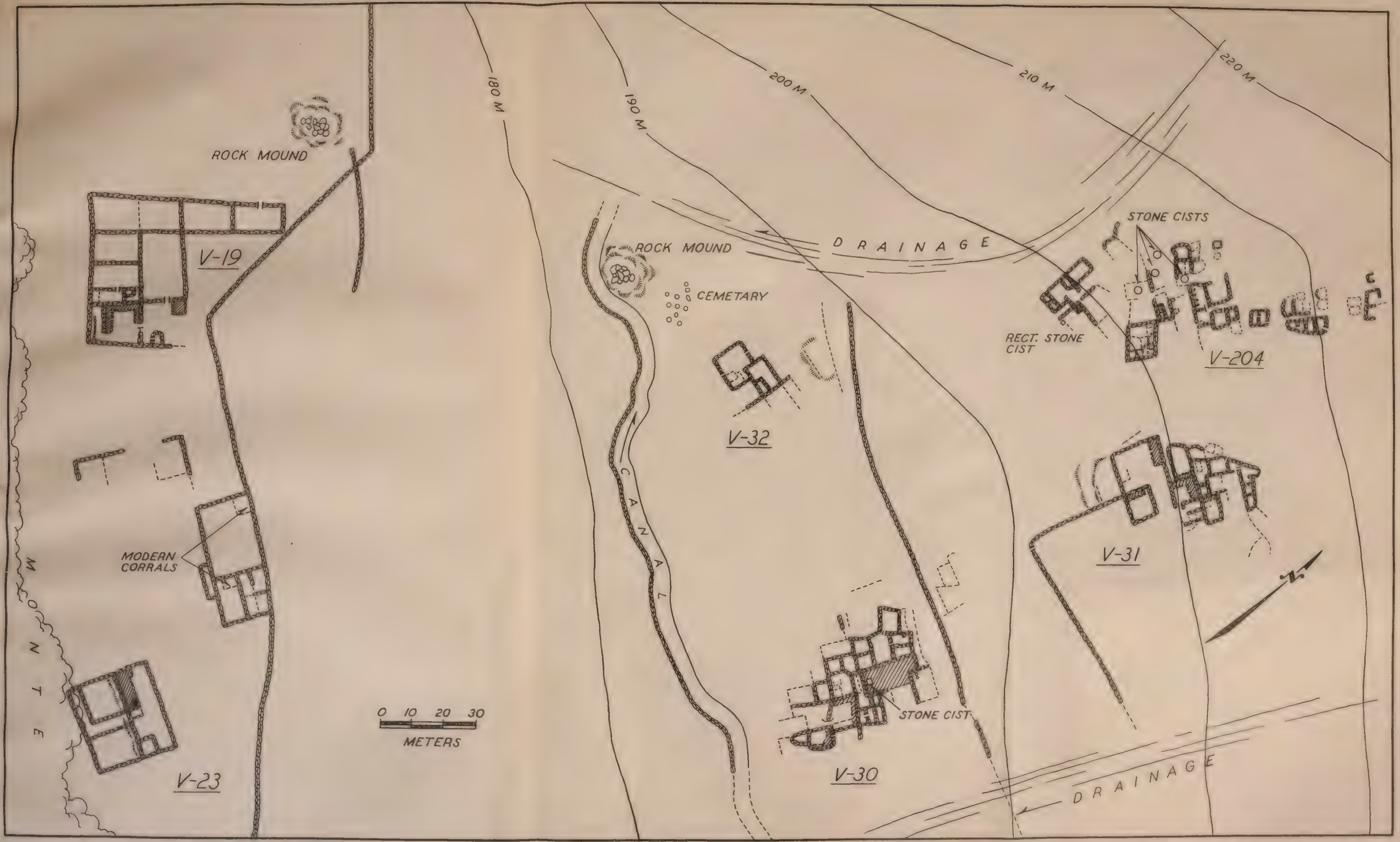

ROCK MOUND
V-19
MODERN CORRALS
MONTE
V-23
0 10 20 30
METERS
180 M
190 M
200 M
210 M
220 M
ROCK MOUND
CEMETARY
DRAINAGE
CANAL
V-32
STONE CISTS
RECT. STONE CIST
V-204
V-31
V-30
STONE CIST
DRAINAGE

Figure 38.—Ground plan of sites in the Gudarra quebrada. V–19, V–30, and V–32 have Huancaco ceramic datings; V–31 is La Plata Period; V–204 seems to show building patterns of both Puerto Moorin and Tomaval; and V–23 is Colonial.

but has a small jog on one side. Its orientation is several degrees off the cardinal directions.

Around three sides of the single-room building on the interior is a raised banquette of earth faced with a single row of stones. The banquette averages 30 cm. in height and 1.8 meters in width. At the northeast corner is a possible doorway which is 2 meters wide. Twenty or 30 meters east, or down slope, from the site is a large wall, presumably built for defensive purposes. Whether or not it has a contemporaneous relationship to V–41 is questionable although it is likely it was built during the Huancaco or Tomaval Periods.

A collection of 265 sherds from V–41 is dated as Huancaco Period by Ford.

V–42.—V–42 is located about 40 meters due west of V–41 (Quad E–2, northwest). In a sense it is part of the same site. There is only one building foundation. This is constructed in the double-face technique. It has an orientation similar to the Semi-isolated Large House in V–41 and also resembles the latter in shape and size (fig. 22). It measures 14 by 11 meters and has two interior banquette platforms. These are made of earth but faced with single rows of stones. One banquette lines the southwest wall; the other is a small platform, 3 meters square, in the north corner of the room. There is a doorway in the northeast corner of the building. A collection of 140 sherds from this site is dated as Huancaco.

V–53.—This is a larger site than either V–41 or V–42. It is situated at the extreme southwest corner of the mouth of Queneto quebrada (Quad E–2, northwest). *Monte* scrub grows over a part of the site, and cultivated lands are only a short distance away.

It is an Agglutinated Village of irregular rather than regular arrangement (fig. 39). There are at least 18 rooms of varying sizes in the main group. Wall foundations are of the double-faced, cyclopean type of masonry, and stand no more than a few centimeters above ground level. A few meters distant, and separated from the main group by an ancient canal, is another cluster of rooms. This smaller second group may be a part of the same site, although our sherd collection on which the site dating is based did not embrace this section.

The largest room in the group is 18 by 14 meters and has a banquette about 2 meters wide running along its southwest wall. In the west corner this banquette is compounded by another, 2 meters square, which is placed on top of it. The rooms which are arranged around this large central room are 12 by 8, 8 by 8, and 8 by 6 meters. There is a small niche, 3 by 3 meters, which opens off one corner of the big room and which may or may not be a separate room.

A considerable portion of the site has been destroyed by flooding so it is imposssible to be sure if there was another room as large as the one just described. The next largest intact foundation outline is in the southwest section of the site. This room has average diameters of 13 meters but is irregular in shape. Outside it is flanked by smaller rooms which vary from 13 by 6 to 6 by 3 meters, and within there is a small nichelike room or cubicle opening off one corner.

It has been noted that an old canal passed just above and west of the main part of V–53. It is, apparently, at about this point that the canal swung east to pass around the hill spur dividing Queneto from the small quebrada to the south. It is not clear what happened to the main canal here as destructive flooding has obliterated its continuity. Possibly, it divided into four branches (map, fig. 39). Perhaps, it fed into only one of these possible "branches" and the other three are merely remnants of canals higher up in the quebrada which converged at this point. In either case, the water from the Queneto canal systems must have passed either on to the quebrada to the south or have flowed south and east into the main canal.

V–53 dates as Huancaco Period on the basis of a fairly large surface collection gathered from within and around the rooms of the main group.

V–113 (*Rinconada sites*).—This site is in the desert between two hills at the very outer border of the Valley in Lower Virú-South (Quad D–5, northeast). Today, the location is almost four kilometers from the border of cultivation, and it is two kilometers from the line of the main prehistoric canal that flowed down the south side of Virú.

The site is marked by low stone foundations of the cyclopean, double-faced type. Stones are scarce around the site, and it is likely that the upper portions of the walls were made of adobes. There are three Semi-isolated Large House units in the site, each separated from the other by about 15 meters. The largest house was probably rectangular, measuring, as near as we can be sure, about 8 by 8 meters. It had interior rooms, and there are also evidences of other walls outside of the main rectangle although these form no determinable pattern. The other two house units are a little smaller than this first structure. One is a single room; the other a double-room house.

A collection of 117 sherds from the site is placed as Huancaco with the validity of dating rated as "poor."

V–178.—This site is in the scrub growth at the north foot of the Sarraque hills in Huacapongo-South (Quad E–2, northeast). An old canal, probably the major one of Huacapongo-South, passes just above it.

The site is a two-room Semi-isolated Large House with evidences of a possible third room (fig. 40, *left*). The rooms are 10.5 meters wide

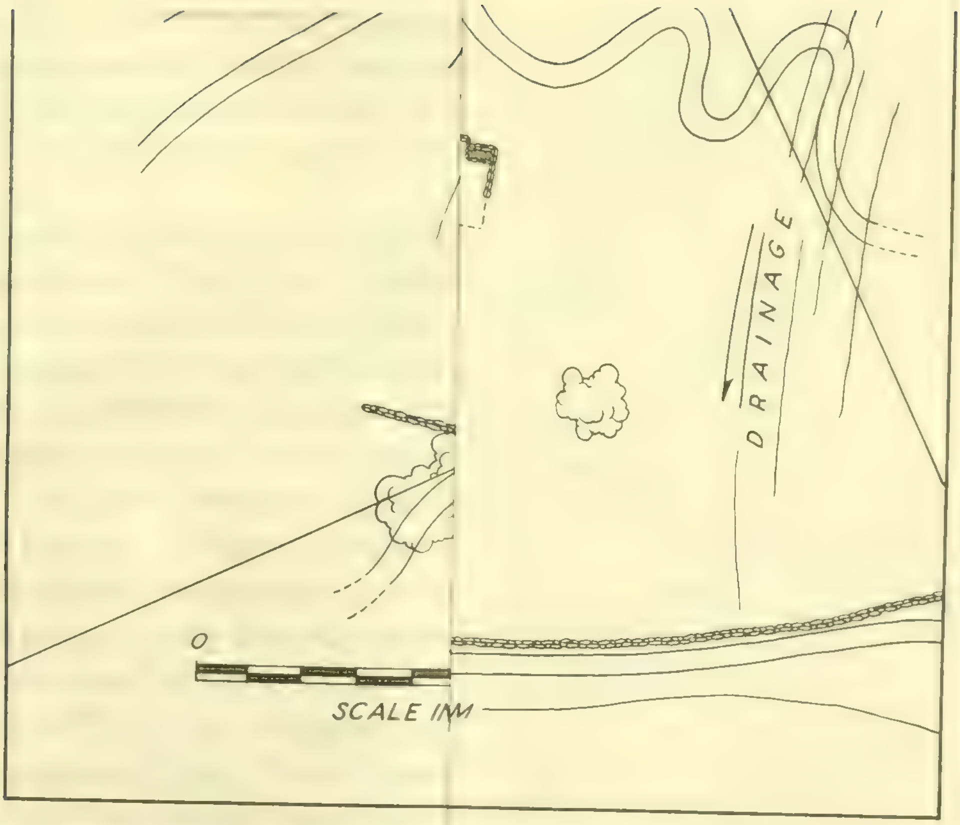

DRAINAGE
O
SCALE IN M

FIGURE 39.—Ground plans of and V–54 as Tomaval; and V–46

955616 O - 53 (Face p. 190)

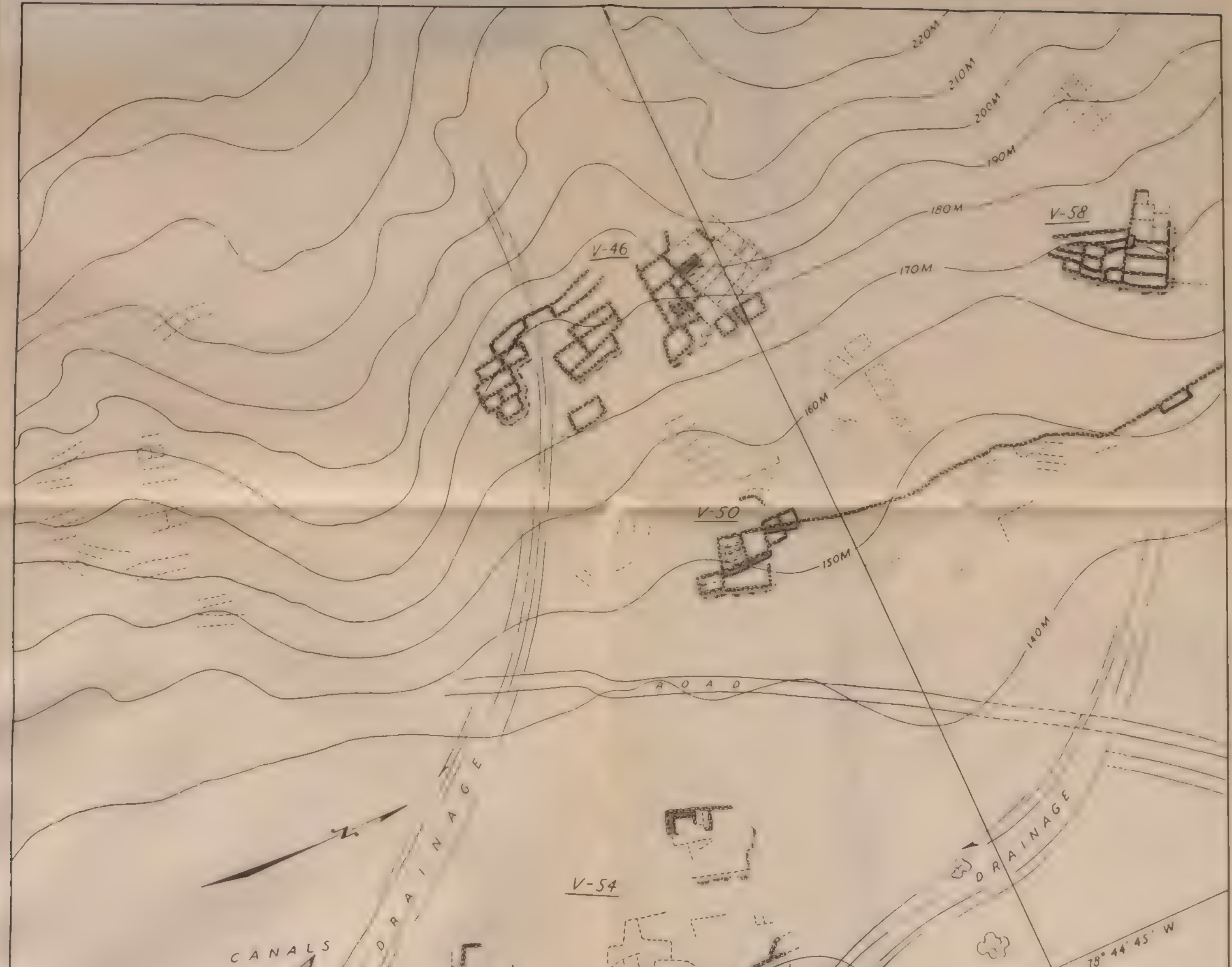

220M
210M
200M
190M
180M
170M
160M
150M
140M
130M
V-46
V-58
V-50
ROAD
DRAINAGE
DRAINAGE
V-54
CANALS
CANAL
79° 44' 45" W
8° 22' 37.5"
V-53
V-48
DRAINAGE
CANAL
0
50
100
SCALE IN METERS

FIGURE 39.—Ground plans of structures at southwest corner of mouth of Queneto quebrada. V–53 dates as Huancaco; V–50 and V–54 as Tomaval; and V–46 as La Plata Period. The remaining sites were not dated.

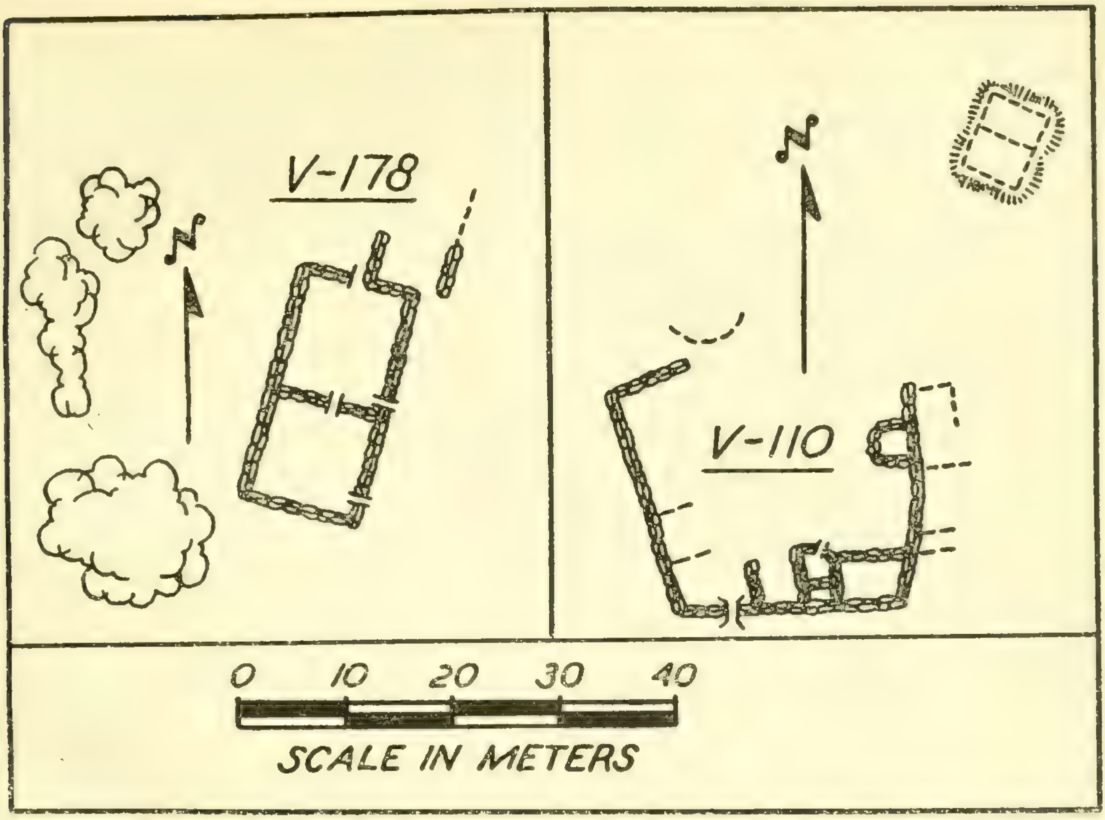


FIGURE 40.—Ground plans of sites V–178 and V–110. Huancaco Period.

with one 10 meters and the other a little over 11 meters in length. Each has a corner doorway opening to the outside. A door passes through the partition which separates the rooms, and there is another door which opens in the center of the northeast wall of the northeast room. This led either outside or to an adjoining room which is now destroyed.

The walls still stand over 1 meter high, and are made of medium-sized boulders (30 to 50 cm. diameters) with abundant mud mortar. Average wall width is 60 cm. The masonry is double-faced, cyclopean.

Ford dates a fair-sized ceramic collection from the site as Huancaco.

V–181.—Located in Huacapongo-North (Quad F–1, southeast). I did not visit this site, but it was described to me, briefly, by Donald Collier. It is an Irregular Agglutinated terrace house group of some 30 to 40 houses. Only stone foundations are extant although Collier noticed a single rectangular cane-impressed adobe on the site.

The dating is very insecure here. Collier gathered only 12 sherds which Ford has placed as Huancaco Period.

V–192.—This is an Irregular Agglutinated terrace house group on a steep slope in Upper Virú (Quad E–1, northwest). The principal part of the site covers an area about 70 meters in diameter on the lower one-third of the slope. Platforms on which houses may have been built, but which now reveal little in the way of stone foundations, dot the upper two-thirds of the slope at irregular intervals (pl. 27, *bottom*). The house remains of the main part of the site (fig. 41) are stone wall foundations made of small- and medium-sized angular boulders. The masonry is double-faced and cyclopean. Wall thick-

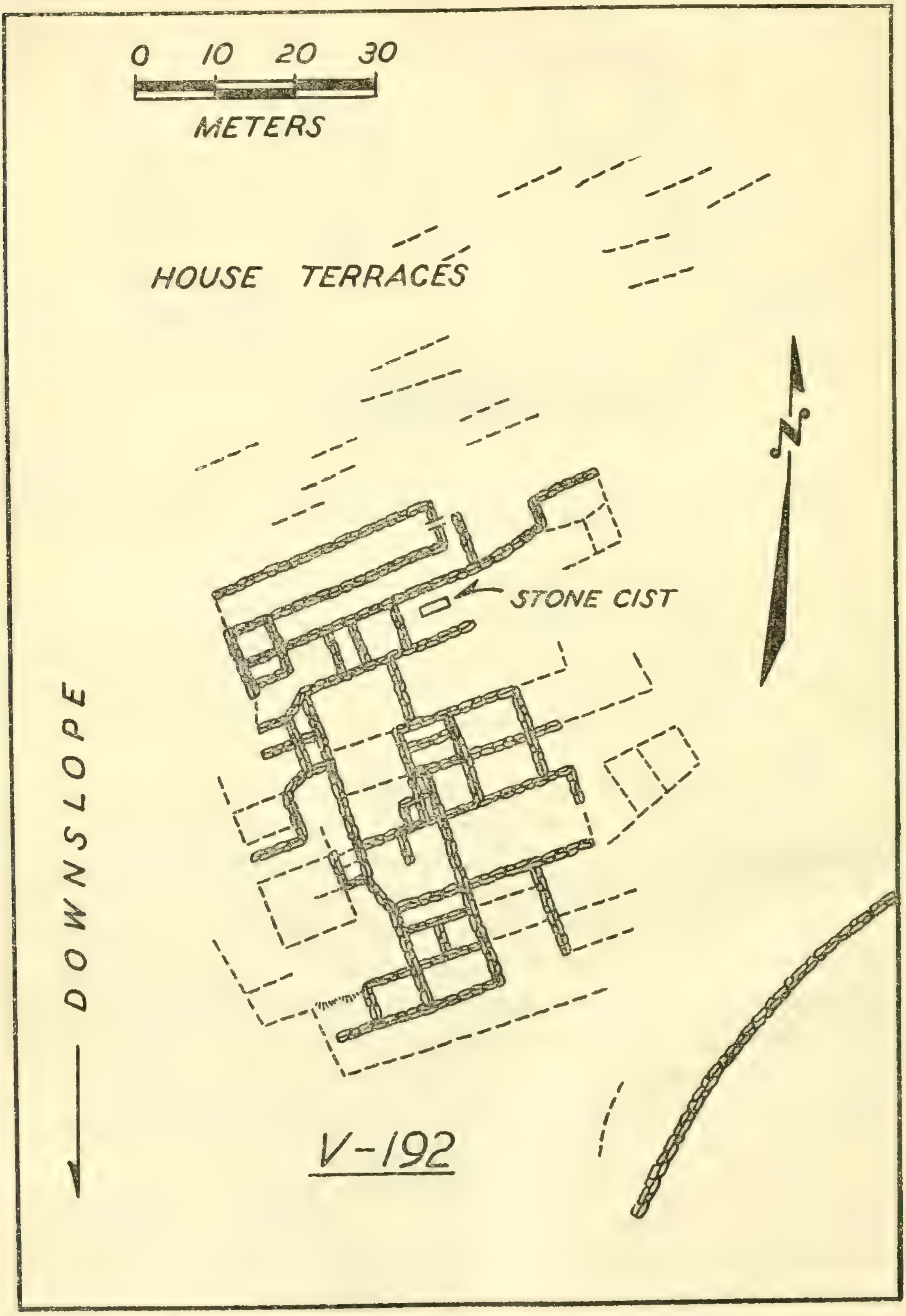

0
10
20
30
METERS
HOUSE TERRACES
STONE CIST
N
DOWNSLOPE
V-192

FIGURE 41.—Ground plan of V-192. Site on steep, terraced slope. Huancaco Period.

ness varies from 1 meter, for what appear to be the main outside walls of the group, to 60 cm. for inside walls. Upper wall sections may have been made of adobes, but, if so, no traces of these are left. There is, moreover, abundant loose rock scattered about the site which could account for full construction in stone without adobes.

The nature of the terrain, necessitating room construction on terrace steps, one above the other, tends to produce a regularity of arrangement. The room pattern is not, however, perfect; there are, particularly at the north and northwest edges of the main group, examples of malalinement suggesting accretional building and haphazard growth of the complex. There are two large rooms, one 17 by 9 meters and the other 21 by 9 meters, which are separated from each other by smaller rooms of various sizes, including those 10 by 6, 6 by 3, and 3 by 2 meters. Most rooms are oblong; but a few are nearly perfectly square, and these average about 4 by 4 meters. At the top terraces, or north end of the site, there are two long, gallerylike rooms measuring 27 by 5 and 26 by 4 meters, respectively. These may once have been divided into smaller rooms, but there is no foundational evidence to support this now. One of the rooms has a rectangular, stone-lined floor cist.

A thick stone wall, of masonry similar to that used in the house structures, cuts across the mouth of the quebrada in which V–192 is located, and a branch of this wall follows around one side of the quebrada passing below V–192 and contacting the natural rock of the cerro opposite. The wall is about 1.5 meters wide. It has now lost much of its height, but it is clearly defensive, having served to protect the inhabitants of the quebrada from attack from the main valley.

There are evidences of a few burials having been excavated in V–192.

Ford dates V–192 as Huancaco Period on the basis of a large collection.

V–14 (*San Juan House site*).—With the exception of Queneto Temple this is the largest structure on the floor of Queneto quebrada (fig. 23). It lies a few hundred meters below and away from the V–16–62 castillo in a southwesterly direction (Quad E–2, northwest). It is constructed on the rocky outwash plain of the quebrada. In 1946 the line of present Valley cultivation was some 400 meters to the east. In aboriginal times, quite likely during the Huancaco Period and later, canal systems traversed the Queneto quebrada to within 20 meters or so of the east or lower end of the site structures.

Maximum dimensions of the site are 110 by 70 meters, and it appears that these measurements may once have been even greater. Quite obviously, sections of wall foundations have been cut away on the western and northern sides of the building complex. Orientation of the group, as concerns the longer axis, is west-northwest by east-southeast.

For the most part the outer and inner walls of V–14 are constructed in the double-face cyclopean style with boulders averaging about 30 to 50 cm. in diameter. Wall width varies from 1 meter to 60 cm. All wall foundations now standing are low and consist only of one or two courses of stones. The surrounding ground as well as the interiors of the rooms have been thoroughly scoured down to the level of natural gravel by the action of ancient floods. The north wall of the room marked "1" (fig. 23) is made in a different manner from the other walls of the ruin, and it is the only such exception in the building. This wall was constructed of upright stone slabs, 60 to 70 cm. high and 35 cm. wide, placed at intervals of 1.1 meters. Between each of these uprights are two smaller stones, also placed on end. None of the stones in the wall are closely fitted but all are separated by 10 to 20 cm. of smaller rocks and mud. It is possible that the north wall of room "1" was never built higher, having been only an enclosure wall of some sort rather than the side to a room. Its constructional similarity to the walls of the large enclosures at Queneto Temple, although on a much smaller scale, suggests this possibility (*see* V–17 (Queneto Temple), pp. 338–342).

Room arrangement within V–14 has a partial bilateral symmetry (fig. 23), and the site is classed as Regular Agglutinated. The exterior outlines of the building group cannot be determined owing to the partial destruction of the site so we cannot tell if it was once enclosed within a compound wall. Planning and room arrangement is evident in the careful alinement of walls, particularly those of the long axis of the site. Some 36 rooms may be counted, but there were undoubtedly more than that in the original layout. At the southeast end of the site there is a suggestion of a central court or large room surrounded by smaller rooms. This central room, marked "sunken court" on the map (fig. 23), may originally have been at a lower level than the surrounding rooms, as implied by the name. It is now at a slightly lower level. The rooms surrounding the "court" vary from smaller ones, 6 by 6 and 8 by 4 meters, to some which may have been almost as large as the "court" itself. At the northwestern end of the site there were more large rooms, but these may be only segments of more complex room groups and not individual rooms. It is in this section of the site group that erosion has been most severe. At no place in the site could I be sure of doorways or passageways. The banquette feature is not common, but occurs three times. In two cases it is made of earth or gravel, faced with a single row of stones, and is placed along one interior side of a room. A third raised area or banquette appears to comprise the entire floor of a small room, 6 by 3 meters.

A very small collection (17 sherds) places this site as Huancaco. The remainder of the collection is Late Guañape (see pp. 52–53), but the nature of the buildings makes it extremely unlikely that they were built at this early time.

V–30.—This is an Irregular Agglutinated rock-walled group in Huacapongo-North (Quad E–1, southeast). It is situated on the lower edge of the gravel and boulder outwash fan at a distance of some 200 to 300 meters from the edge of modern cultivation. Immediately south of the site is an old canal; a few meters to the north is the upper, or northernmost, major wall which runs along the valley in this area.

The wall foundations are made in the double-face technique of unworked boulders and mud. It seems likely that the walls of the buildings were once built entirely of stones and mortar.

The total extent of the site is about 60 by 40 meters, but a number of rooms around its edges have been destroyed. There is no evidence of careful over-all planning in the construction of this group. As is readily noted (fig. 38), wall alinements from one room to the next are quite irregular. There are between 25 and 30 rooms of varying sizes. There is one large room with a floor level raised higher than the adjoining rooms and with a rectangular stone-slab cist in the floor. This room is not perfectly rectangular, having a small jog at one end. Its over-all measurements are 17.5 by 8 meters. There are several other rooms which average around 8 by 6 meters, but most of these are asymmetrical. One room, about 10 by 8 meters, has a raised banquette around two sides. A slightly smaller room also has banquettes on two sides. There are a number of small rooms, averaging about 4 by 6 meters; and there are one or two which are smaller than this. Slab-lined doorways, leading from one room to another, are a common feature.

A component of over 100 sherds dating as Huancaco Period places the structure. There is also an Early Puerto Moorin occupation at the site (pp. 79–80).

V–32.—Is a small Irregular Agglutinated Village site in Huacapongo-North (Quad E–1, southeast). On the outwash plain of boulders, it lies some 80 meters west of V–30. It is also between the major wall, which passes just above it, and the old canal, which is situated just below it.

The site now consists of only two principal rooms. There are evidences that others had been attached, but these were destroyed by flooding. The two main rooms measure 12 by 9 and 10 by 7.5 meters, respectively. They are arranged so that one is inset into the corner of the other (fig. 38). Each has a small corner room or rooms. One room has two doorways, and at one of these doorways there are a few stone slab steps leading up into the room.

This is a mixed site, but it seems likely that the larger component, dating as Huancaco, places the buildings. The other component is Early Puerto Moorin.

V–39.—This site is in Queneto Quebrada (Quad E–2, northwest). It has been described under the Gallinazo Period (p. 116). As previously stated, it was probably occupied during both Late Gallinazo and Huancaco.

V–51 (*Castillo de Tomaval—dwelling site*).—The structures at this site (*see* Quad E–2, southwest) were probably built during the Gallinazo Period, but some of them were used, and maybe built, in Huancaco times (pp. 116–118, under Gallinazo Period discussions).

V–102.—The site is located in the lower part of a small quebrada which opens off the main Valley just below the Castillo de Tomaval (Quad E–2, southwest). On the quebrada floor, between a spur of the bordering hills and two small detached hills in the quebrada bottom, there is an area about 100 by 200 meters which is covered with refuse. A small cemetery, approximately 30 meters in diameter, is located within this refuse zone. Also within the refuse area there are scattered stone-walled structures. In one case, these appear to be a segment of a once larger Irregular Agglutinated group, now destroyed. The remaining rooms are slightly less than 5 meters square. At another part of the site there is a rock house foundation of a single large room, 11 by 10 meters. Across the mouth of the quebrada, running from the spur to one of the isolated natural hills, is a rock wall. This was apparently a defensive wall protecting the habitation area within the quebrada from attacks from the Valley, proper. On the slope of the spur overlooking the refuse area and the scattered buildings described are several terraced house platforms.

There are 257 sherds from here which are dated as Huancaco as opposed to a small increment of Early Puerto Moorin sherds. Probably the cemetery and most of the structures date as Huancaco.

V–110 (*Rinconada sites*).—On the desert floor in Lower Virú-South, remote from the cultivated Valley, are the Rinconada sites. V–110 is observed as low rock foundations. Perhaps these once supported adobe superstructures. The site is largely outlined by a quadrangle which is mostly incomplete on one side. This quadrangle has average measurements of about 26 by 22 meters (fig. 40, *right*). Within the quadrangle, and also attached to it on the outside, are remains of partitions of rooms. Most of these appear to have been rather small (3 by 3 meters, or less in some cases). About 25 meters distant from the structures is a small platform which may be artificial. It is about 7 meters square and 2 meters high. The top is flattened and there are vague evidences of the stone foundations of two conjoined rooms.

One hundred and thirty potsherds from this site are Huancaco; 39 more are Early Puerto Moorin. I am inclined to place the stone buildings on the desert floor as Huancaco. The little platform may be earlier although I have no evidence for this supposition.

V–143.—This is a rock-walled house group on the outwash plain of the quebradas lying immediately to the northeast of Hacienda Tomaval (Quad E–1, southeast). It is probably a small compound unit of which the double-faced rock-wall foundations of some of the rooms are still standing. An outer wall or rectangular enclosure may have outlined the site, but this is either destroyed or absent on one side. Three rooms, each about 3.5 by 6 meters, are inside the quadrangle, and there is also a larger room which is about 8 by 7.5 meters (fig. 42). A good portion of the rectangle is badly torn up so that room outlines cannot be perceived. Slab-sided doorways connect interior rooms at three places.

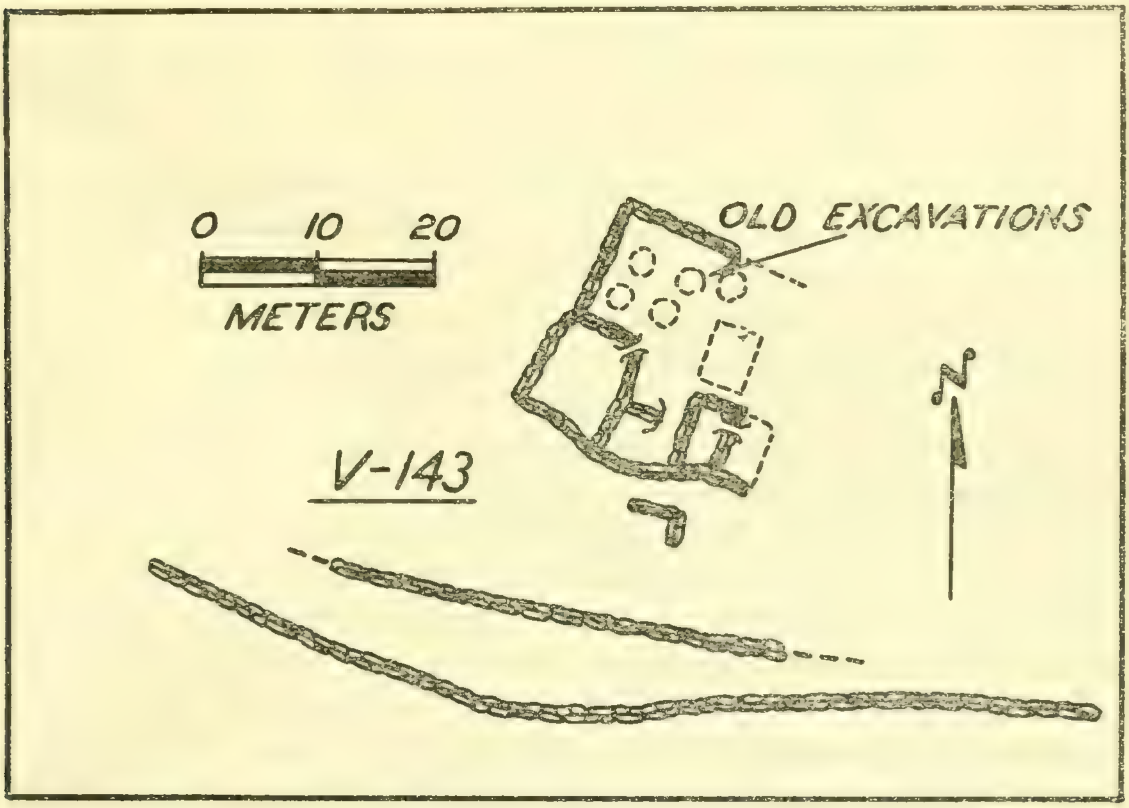


FIGURE 42.—Ground plan of V–143. Huancaco Period.

Just about 5 meters down slope from the site proper a recent excavation disclosed the corner of a room or tomb of stone masonry with human bone fragments scattered about.

Fourteen meters down slope from the site there is a section of an ancient wall, 1 meter in width and now reduced almost to ground level. A section some 40 meters long runs east-west paralleling the other prehistoric wall which is only 5 meters or so below it. This second wall is better preserved and runs for several hundred meters across the mouth of the quebrada.

Huancaco and Tomaval ceramic components are represented from this house group as is a large collection of Early Puerto Moorin. It is my opinion that the Huancaco and Tomaval material dates the buildings.

V–150.—This small group of rock-walled rooms is also in the quebrada area behind Hacienda Tomaval (Quad E–1, southeast). It may once have consisted of a half-dozen or so rooms (fig. 15). Now, only two room outlines can be reasonably inferred. These two are placed one above the other, terrace-fashion. Both rooms are approximately 11 by 5 meters. The upper has a banquette about 2 meters wide along its south wall; the lower room has a narrower banquette along its north wall. The lower room also has a banquette adjunct, 2 by 7 meters, on its southwest corner.

Two components here, of about equal numerical strength, date as Huancaco and Early Puerto Moorin. I am almost certain that the Huancaco dates the ruins.

V–180.—A small group of rock-walled house foundations situated well up into the bordering foothills of Huacapongo-North (Quad F–1, southeast). I did not visit these ruins. They were listed by Collier who made a small surface collection there. This surface collection has been dated by Ford as Late Guañape and Huancaco. There is no evidence offered as to which component might date the buildings.

V–228.—Site V–228 is on a descending summit of a hill spur in Huacapongo-North (Quad F–2, northwest). The site overlooks the flood plain of a rocky quebrada. It is a series of connected stone-wall foundations arranged step-fashion down the crest of a hill.

Rooms are large and arranged in single file (fig. 43). There are five or six rooms, and this appears to be the total extent of the group. Rooms all conform to a width of from 8 to 10 meters. This is the cross-crest measurement. Their other diameter varies from 10 to 4 meters. In two cases there are wide banquettes placed along one wall of rooms, and in a third case there is a banquette or raised platform which seems to run between two rooms. This last feature measures 3 by 8 meters, and it may be that it was a room in itself. Leading from one room to another, on the separating terrace slope, there is a set of stone steps. Other features are three walls which extend out from the south side of the group at intervals in arc-fashion. These embrace terrace platforms, but there were no visible surface features of rooms or buildings on them. At the west, or lower, end of the site there is a room or enclosure which has utilized a cluster of live boulders in the architecture. Between two big boulders at the extreme lower end is a passageway or gate which could have served as a well-

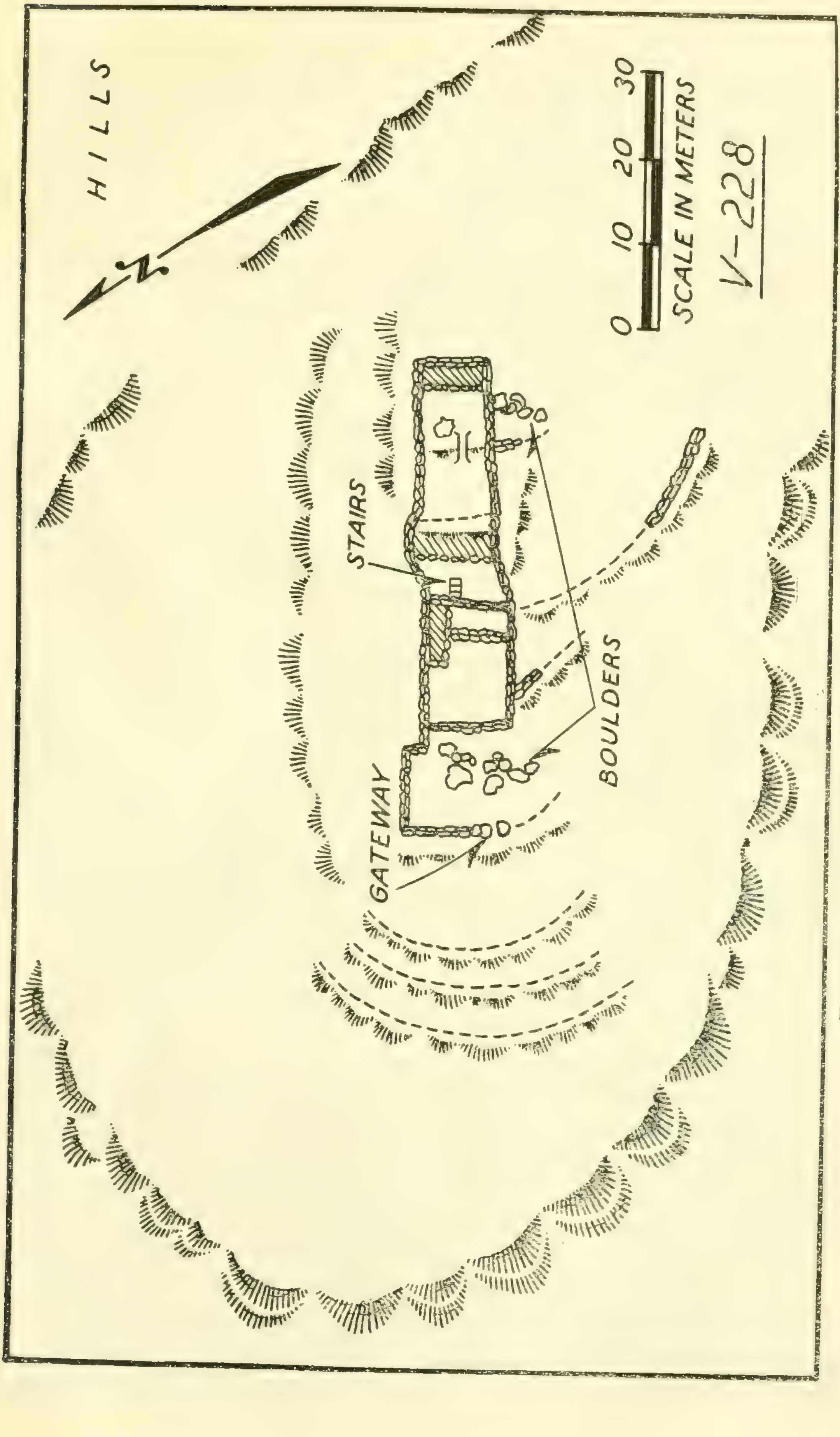

HILLS
N
STAIRS
GATEWAY
BOULDERS
0 10 20 30
SCALE IN METERS
V-228

FIGURE 43.—Ground plan of site V-228. Huancaco Period.

guarded entrance to the rest of the rooms. On a series of terraces below the site proper there is abundant rubbish and what are probably old house platforms.

A collection from within the rooms of the site, proper, shows a majority of Huancaco sherds, and the site probably dates as of this period. Early Puerto Moorin materials are in the collection, and from the terraces and presumed house platforms below the site there is another collection containing both Early Puerto Moorin and Tomaval Period pieces.

Additional occupation sites.—There are 14 additional sites which show Huancaco Period ceramics but on which no structures can be identified with these ceramic remains or on which no structural evidences are to be found whatsoever. Sites V–13 (Quad D–2, southeast), V–17 (Quad D–1, southeast), V–33 (Quad E–1, southeast), V–50 (Quad E–2, northwest), V–201 (Quad E–1, southeast), V–202 (Quad E–1, southeast), and V–209 (Quad E–2, northeast) all have architectural remains in the form of stone house foundations, but these remains may be identified with periods other than Huancaco. The one exception is V–13 where the house remains cannot be identified with any of the periods represented by the rubbish at the site.

Site V–82 (Quad D–4, southeast) is an open midden site about 100 meters in diameter which is situated on the southeast flank of Cerro Bitín. The site dates wholly from the Huancaco Period.

Sites V–90 and V–91 (Quad C–4, southeast) are refuse areas within adobe-walled enclosures near the great site of Huancaco. V–90 lies on a broad sand-covered hill 300 to 400 meters west-southwest of the main buildings of V–88–89. It appears to have been a great enclosed area walled on four sides by a wall made of adobe bricks. Sections of the wall on the south and east sides can still be traced although they are badly eroded. From their extent it appears as though the original enclosure was as much as 300 to 400 meters across. The walls are made of plain, rectangular mold-made adobes of small size. These were laid solid with no rubble fill. In some places the wall measures 80 cm. in thickness. Sherd refuse and shells are scattered over a great area here, extending, in fact, over almost the entire zone of the enclosure. In no place, however, does this refuse appear to have been more than a few centimeters deep. At several locations, burials, reputedly of the Huancaco Period, have been found within the enclosure. A surface inspection of the site convinces me that it is essentially a broad but thin Huancaco Period occupation.

Closer to V–88–89, and to the area designated as V–38, is another area some 100 to 150 meters in diameter. We have called this V–91. Adobe walls, similar to those of V–90, but with stone foundations, extend out into this section. These walls, now partially obliterated, seem to have been extensions to form courtyards (pl. 49, *top*) which were added to V–38 and to V–88–89. These courts or enclosed areas may also have been connected to the walls of V–90 which were 100 to 200 meters distant to the west. Between V–90 and V–91 there is now, however, a great swath of drift sand which has cut away or covered any such old connections which may once have existed. The walls of V–91 are 2.5 meters high in some places and have an average width of about 90 cm. Like those of V–90, they are made of the small, rectangular, plain adobes. In the V–91 area there is considerable thin refuse. I walked over the site, and a casual inspection of the surface material indicated that it, too, like V–90, was of the Huancaco Period.

Site V–139 (Quad C–6, northwest) is only about one kilometer from the beach in Lower Virú-South. Today, the surrounding area is sandy, windswept beach country, completely arid (pl. 27, *top*). The site is on top of an old natural dune, and it covers an area about 75 meters in diameter. The refuse is composed of crushed shell and potsherds. At one point on the site is an old, looted cemetery. Both the midden and the cemetery date as Huancaco Period on the basis of a large collection gathered by Ford. Although there are no architectural features at the site it is of interest to note that very near V–139 there is an area 100 by 200 meters in extent that shows evidences of intensive prehistoric irrigation and cultivation. Remains of a section of a canal, 3 to 5 meters in width, can still be seen, and on each side of the canal are rectangular plots of dried and crackled clay which measure about 20 meters square. This is the most southwesterly point in the Valley where we have definite evidence of cultivation. It is quite possible, although not proven, that these irrigation plots were in use during the Huancaco Period.

Site V–267, which dates wholly from the Huancaco Period, is an open midden site in Lower Virú-North (Quad B–4, southwest). It is a midden of crushed shell and sherds spread over the top of a low beach dune. The extent of occupation is about 100 by 40 meters.

Site V–170 is a midden area situated on an ancient sand dune which is surrounded by cultivated fields in Lower Virú-South (Quad C–3, southeast). The area of occupation is about 100 meters in diameter. There is some old pitting on this site, but there is no evidence that any burials were ever discovered. The bulk of the material is Huancaco Period although there is a small component of Early Puerto Moorin pottery here also.

V–171, as far as the Huancaco Period is concerned, is represented by refuse levels in the accumulated detritus within the big adobe enclosures of a later period site. This site was excavated by Collier (Quad C–4, northeast).

DWELLING-CONSTRUCTION MOUNDS

Explanatory note.—As in the previous period, the classification "Dwelling-Construction Mounds" is applied to those moundlike sites of earth and adobe which appear to be dwelling or building remains. These are accumulations of structures, built one over the other in many cases, which now appear to be more or less shapeless platforms or hillocks of soil and adobes.

Sites of this type are not so common for the Huancaco as they were for the Gallinazo Period. In a number of cases such Dwelling-Construction Mounds seem to have been reoccupied or re-used very briefly in the Huancaco Period but to have been built largely in the preceding Gallinazo Period.

Only four sites of this type belong, purely, to the Huancaco Period. These are:

V-93
V-233
V-237
V-249

Six others are mixed sites, built in earlier times but used again by the Huancaco peoples:

V-162
V-250
V-258
V-259
V-295
V-310

V-93 (Castillo de Huancaco, outlying section).—About 150 meters from the main buildings of the Castillo de Huancaco (V-88-89) there is a low rubbish-covered hummock some 2 to 3 meters in height (Quad C-4, southeast). The hummock or mound is 100 by 75 meters in extent. Old pot holes show evidences of adobe-walled rooms a few centimeters below the surface. The adobes used in the walls are plain and rectangular, and those measured averaged 30 by 22 by 11 cm. It is fairly obvious that this mound is the result of adobe constructions, possibly dwellings.

A collection of 108 sherds dates as Huancaco Period.

V-233.—V-233 is in Middle Virú-South, not far from the Pan-summit platform which is 14 by 12 meters; and the base of the mound or hill rising above the surrounding cultivated fields. Its total artificiality is debatable. It may be a natural hill or old dune on which there has been added both refuse and constructions. It rises about 7 meters high and is 200 by 80 meters in extent. It has a gentle, domelike slope and a large flat summit. I observed no structural remains on the exact center, but near the northwest brow old excavations show refuse of at least 1 meter in depth and also adobe platforms constructed of the plain, rectangular mold-made adobe bricks. These bricks were of the small variety in the general size range of 30 by 20 by 10 cm. Along the western fringe of the site there are a string of old grave pits.

The site, on the basis of over 500 sherds, dates as Huancaco.

V–237.—This is another small hill in the Valley floor of Lower Virú-South (Quad D–4, northwest). The hill rises 6 to 7 meters above the flats. At the crown of the hill there is a summit platform which appears to be artificial and is probably made of adobe bricks. This summit measures 35 by 20 meters. In an old excavation in this crown, adobes were seen to lie only a few centimeters below the refuse and sand of the surface. This same excavation also revealed the corner of an adobe-walled chamber in the crown platform. The adobe bricks measured were 33 by 23 by 10 cm. Fragments of human bone scattered around show that graves have been opened on the hill, some of them near the crown.

A large collection dates as Huancaco.

V–249.—This is one of a group of small mounds in the fields north of the Hacienda Santa Elena (Quad C–3, southwest) (pl. 17, *second row, left*). It is made of earth and adobe. The highest point on the mound is 3.5 meters above the fields (pl. 27, *center*). There is a summit platform which is 14 by 12 meters; and the base of the mound is somewhat larger than this. A long ramp (22 meters) extends from the summit down to the flat.

Old excavations in and around the summit platform show that it consisted of numerous rooms, later filled with refuse. The room walls appear to be of tapia adobe although I am not absolutely certain of this. Apparently the platform and mound were also used for burials.

Two hundred and six potsherds from the mound date it as Huancaco. Ford makes the qualification that it is "early" Huancaco, placing it, perhaps, between Huancaco and Late Gallinazo.

V–162 (*Huaca de la Cruz*).—This site is described under the Gallinazo Period (see pp. 123–124) (Quad D–2, southwest). The Strong and Evans excavations showed it to be a Dwelling-Construction accumulation placed on an old natural hill. The height of the mound was also added to by rubbish accumulations. Graves of Huancaco, Tomaval, and La Plata Periods have also been found at the site. Strong and Evans make clear that there was some adobe building of the Huancaco stage which overlies that of Gallinazo. Huancaco structures are characterized by plain rectangular adobes.

V–250.—Located in the Santa Elena mound group (Quad C–3, southwest), this mound was built during the Gallinazo Period but was re-used for dwelling site, cemetery, or both during the Huancaco Period (see p. 126).

V–258.—Located in Quad B–4, southwest, it seems unlikely that there was ever much Huancaco construction at this site (see pp. 127–128). Possibly, the Huancaco Period use was only as a cemetery rather than as a dwelling site.

V–259.—Located in Quad B–5, northwest, this site, like the mound V–258, was apparently built in Gallinazo times. Its Huancaco re-use is demonstrated by pottery fragments of that period, but we cannot be sure if these came from graves, or dwellings, or both (see p. 128).

V–295.—This mound lies less than one kilometer north of Hacienda Carmelo and is immediately north of and adjacent to V–294 (Quad B–4, southeast). The site is composed of three connected mounds of earth and adobe (?). These mounds range from 2 to 1.5 meters in height, and their connecting links are low saddles of earth or melted adobes. Nearby, V–294 is also connected with the V–295 group by a similar low saddle or strip of sterile claylike earth.

The conformation and arrangement of these mounds suggests that they are dwelling-construction units, and their structural connection with V–294, in which we have observed adobe constructions (see p. 130), further strengthens this interpretation.

Actually, the collection from V–295 is pure Huancaco Period; but because of the intimate association with V–294, a site of the Late Gallinazo Period, I have listed V–295 here with the mixed rather than the pure sites.

V–310.—Located in Quad C–4, northeast, this site is described with the Gallinazo Period (p. 131). Collier, who excavated the site, suggests that the adobe constructions in it were of both Gallinazo and Huancaco date.

PYRAMID-DWELLING-CONSTRUCTION COMPLEXES

Explanatory note.—Sites of this type include artificial pyramids or terraced mounds plus constructions which represent aggregations of rooms or buildings. As with those of the Gallinazo Period, it is presumed that sites of this type had special religious, political, or combined functions and were also dwelling places for a considerable population.

There are nine such sites which date, at least in part, from the Huancaco Period. Two of these are pure Huancaco sites (V–166 and V–280), some are mixed, and others show only a superficial occupation during Huancaco times.

V–59
V–88 and V–89
V–149
V–152
V–153
V–155
V–166
V–280

V–59 (Huaca Gallinazo).—In the previous discussion of this site (pp. 132–136) (Quad B–4, northwest) it was noted that Huancaco Period sherds were found in the upper levels of stratigraphic cuts made in the house and refuse platforms. The site may have had superficial Huancaco Period occupation. It was, possibly, also used for a few burials during the Huancaco Period. It very definitely was not an important center in the Virú Valley in Huancaco times as it had been earlier.

V–88 and V–89 (*Castillo de Huancaco*).—The great adobe palace and pyramid group in Lower Virú-South is known locally as the "Castillo de Huancaco."[41] It does not, however, present the same constructional characteristics as the Hilltop Castillo Fortification Complexes which we have described in the Gallinazo Period (pp. 157 ff.) and which we will also describe for Huancaco (pp. 224 ff.) There are, as we will see, some indications that V–88–89 was defensible and was built to withstand attack, but the topographic situation of a hill or spur top and the encircling wall or enclosure are lacking.

Huancaco is the largest, best-preserved adobe ruin in the valley. Gallinazo (V–59) is probably more extensive in area and in the number of rooms and buildings it represents, but its badly melted condition makes it less spectacular. The location is at the foot of the main projection of Cerro Compositan (pl. 30, *top*). This is in Lower Virú-South at the outer margin of the scrub growth that now covers a large section of this part of the valley (Quad C–4, southeast). Formerly, judging from the disposition of prehistoric canals, these Valley bottoms of Lower Virú-South were in crops.

The site has been built upon some low ledges or hills which are the lowermost part of the Compositan mass on the side facing in toward the Valley. The adobe structures conform closely to these ledges, hills, or low spurs so that almost none of the natural rock and earth formations are visible upon casual inspection of the site. This, of course, adds to the impression of size and grandeur as one views the ruins from the Valley floor. A large part of the building compound lies below the 40-meter contour interval, but a significant portion extends up the hill slope, going as high as the 70-meter (fig. 44).[42] Orientation of the complex is not uniform. It appears that the builders took advantage of the terrain without particular reference to cardinal directions. On a northeast-southwest line, the longest axis of the site, adobe walls and pyramids are found over an extent of almost 300 meters. On the cross-axis, which is greatest near the southwestern end of the site, we have a maximum of 200 meters.

The southwestern or southern portion of the site was designated by us as V–88; the northeastern part as V–89. The division is arbitrary and was used in specimen collecting and cataloguing. The approximate dividing line which we used was the drainage wash which runs down the slope and cuts through the buildings (fig. 44). Other site numbers were assigned nearby and related areas. V–90 and V–91 are middens associated with adobe-walled enclosures west of the main buildings. These date from the Huancaco Period (pp. 200–201). Site V–38 is the midden within and around the enclosure wall at the northwesternmost part of the complex. This section dated as Late Gallinazo (p. 120). Site V–93 is a Dwelling-Construction Mound north of V–88–89. It dates as Huancaco (p. 120).

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[41] Bennett (1939, pp. 22, 77–78) refers to this site as "Castillo de Huancaquito." We were informed locally that this name is usually applied to another site.

[42] These contours, taken from topographic maps prepared from the aerial photos, are not accurate as to detail. They give some idea of the general conformation of the land on which the site is situated, but they would not be confirmed by an instrument survey.

In general, the same type of construction is found throughout the complex. This is the use of solidly packed adobes without rubble fill or without prepared stone foundations. In conforming to the natural knolls at the foot of the hills it was necessary to build up those sections of the site closest to the Valley floor to a greater height than those located closer to the hills. That is, the total effect of the complex is that of a platform, or series of platforms (pl. 30, *center*), built out from the side of a natural hill.[43] More adobes were needed in that part of the platform farthest removed from the underlying hill slope formations.

Adobes in Huancaco are all small, rectangular, mold-made and plain. Those measured in V–89 ranged from 36 by 29 by 24 to 19 by 12 by 9 cm. Massive construction, wherever revealed in cross section by erosion, was like that noted for the major buildings of the Late Gallinazo phase. The usual construction unit seems to have been a wall section or oblong column of adobes. These columns were a meter or so thick at the base, tapered somewhat toward the top, and were simply placed alongside the next columnar unit, usually without mortising the ends of the bricks (pl. 34, *bottom*, *left* and *right*). Adobes were laid in mud mortar with interstices about 1 cm. wide in most cases. In some places, however, stone spalling or chinking was used between adobes, and the mud mortar was much thicker. In general, terrace walls all have a definite slope, and all large, free-standing walls taper toward the top.

The main structure of V–89 is a terraced pyramid at the northernmost end of the main site (pl. 31, *top*). The base of this structure is 54 by 42 meters. One corner of it is tied in at the lower terrace levels with other parts of the site. There are five terrace levels to the pyramid, and its uppermost level stands, as an average, some 7 meters above the Valley floor (pl. 32, *top*). Some of this height may be natural, but the basal hill, if such exists, is completely hidden from view under the adobes. The terraces vary from 5 to 11 meters in width and average over one meter in height. The summit platform is approximately 7 by 8 meters. The first and second terraces extend around three sides of the pyramid. At one corner there is a narrow inclined ramp leading from the floor of the first to the floor of the second terrace. This ramp, however, goes no farther. The third terrace level is a platform which is only on the southeast side of the main pyramid. It is intermediate in height between the second and fourth levels. There are two rooms or buildings on this third terrace level, the largest of which has been partially excavated at some time in the past. The fourth terrace level extends on all four sides of the summit platform; and the fifth level is the summit itself.

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[43] It has been noted (pp. 172 ff.) that this was the building plan for V–75 and for the Huaca de La Luna, Moche.

In 1946 I explored an old *huaquero* hole or tunnel which entered the southeast face of the pyramid from the fourth terrace level. Four meters inside this tunnel are the remains of a red-painted plastered wall; at a distance of 4.5 meters inside there is a white-plastered wall; and at 5.35 meters inside a third wall showed up, also coated with white plaster. Beyond this point the tunnel proceeded for an additional meter, but no other walls were revealed. This old cut shows, conclusively, that there were at least four building mantles to the fourth-level terrace, and each of the first three was finished over with plaster and painted. From the tunnel cut it could also be observed that the building layers or mantles were leaned against the previous wall at some five to ten degrees off the vertical. In the construction of the pyramid the adobes were laid lengthwise but the corners of the terraces were bound in. There is also a tendency toward coursing in the adobes of the pyramid terraces so that a crack running vertically will not easily split a wall. This coursing is not, however, exact or consistent.

An interesting architectural feature is noted in connection with this pyramid. Off the northeast corner the wall of the first or bottom terrace is quite high, rising 4.5 meters above the natural ground level. Actually, the level of this terrace floor is only 3 meters above ground so that the wall extends up, parapet-fashion, along the terrace edge for an additional 1.5 meters. Outside the wall, at the base, there is a reinforcement 2.5 meters high, 2 meters wide, and with a tapering top. Its function is quite definitely that of a buttress. Similar buttresses are disposed along the northeast wall of the main group in the V–88 part of the site (see fig. 44).

Separated from the main group, off the northeast end of V–89, there are two small areas of eroded adobe structures which are so far gone that no wall patterns can be made out. Presumably, these were additional buildings connected with the site.

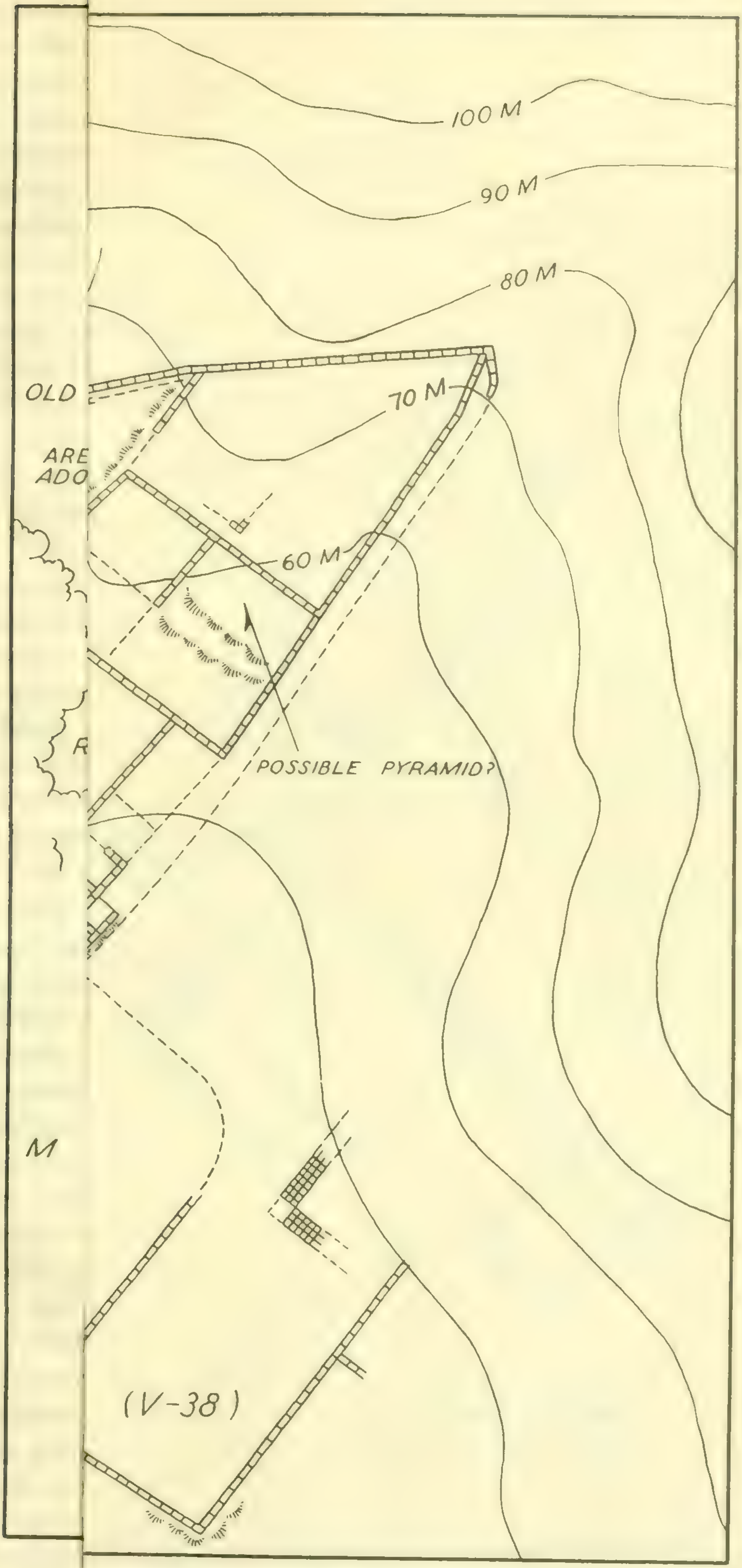
Around the foot of the terraced pyramid of V–89 curves the major canal of the south side of the Valley. This canal can be traced from the foot of the Cerros Compositan, opposite Cerro Bitín, to V–88–89.

It terminates here, or, at least, I was able to trace it no further. Nevertheless, the presence of old canals in the sand in the vicinity of site V–139 (see p. 201; location Quad C–6, northwest) near the beach at the southwestern corner of the mouth of the Valley, makes it almost certain that this canal did continue although we are no longer able to follow its course.

Joined on to the pyramid at its southeast corner are a series of large rooms and galleries which are constructed like raised platforms against the hillside. Facing the Valley, the outer walls of these platform rooms are 5 to 6 meters high. Room or court floors appear as masses of irregularly melted adobes. Dividing walls vary in height; some are still 2 or 3 meters high; others are no more than eroded nubs. Up slope, some of the enclosed areas or great rooms have only the natural earth or rock floors of the hillside, all adobe construction except the walls having been washed away if it once existed.

A great adobe wall extends up the slope from a corner of the main building (pl. 33, *top*, *right;* pl. 49, *center*). This would appear to have been a defense wall and to have served to keep attacking parties from moving easily along the walls of the main group on the advantageous uphill side. Farther south, behind V–88, there are remnants of similar walls running up the slope (pl. 33, *top*, *left*), and there is still another wall of this type on the west side of the site. This one connects with the main platforms and runs out along the crest of a little natural ridge. Presumably, it would have the same effect as the others: to prohibit an attacking force from deploying at will along the side of the building. These free-standing walls are about 1 meter wide at the base and taper to about one-half that width at the top. Sections of the walls still stand as much as 2 to 3 meters high. The sections were 3.5 to 4 meters in length, and each section was finished off smooth at both ends. The next section was placed adjoining it, but the ends of the two were not mortised together (pl. 33, *bottom*, *right*). These defense walls were much less well made than the masonry and construction of the pyramid terraces or the walls enclosing or dividing the connected platforms (pl. 33, *bottom*, *left*). Coursing of adobes in the walls was very haphazard, and the mortar in the interstices is often 5 to 10 cm. thick (pl. 34, *top*, *left*).

The complex structural history of the large rooms and corridors on the high platforms is indicated by a very small excavation which Ford and I made in what we have designated as "Room 1" (see fig. 44). This is a room, 17 by 15 meters, located on the platforms to the southeast of the pyramid of V–89. Along the south or southwest wall of the room there are five cubicles or small rooms, each about 3 by 2 meters. All the walls of Room 1 are badly eroded, none being higher than 1 meter. The adobe floor gives the appearance of dried earth


100 M
90 M
80 M
70 M
60 M
OLD
ARE
ADO
POSSIBLE PYRAMID?
R
M
(V-38)

FIGU outhern portion of the site, dates as Huancaco; V-89,
s Late Gallinazo.

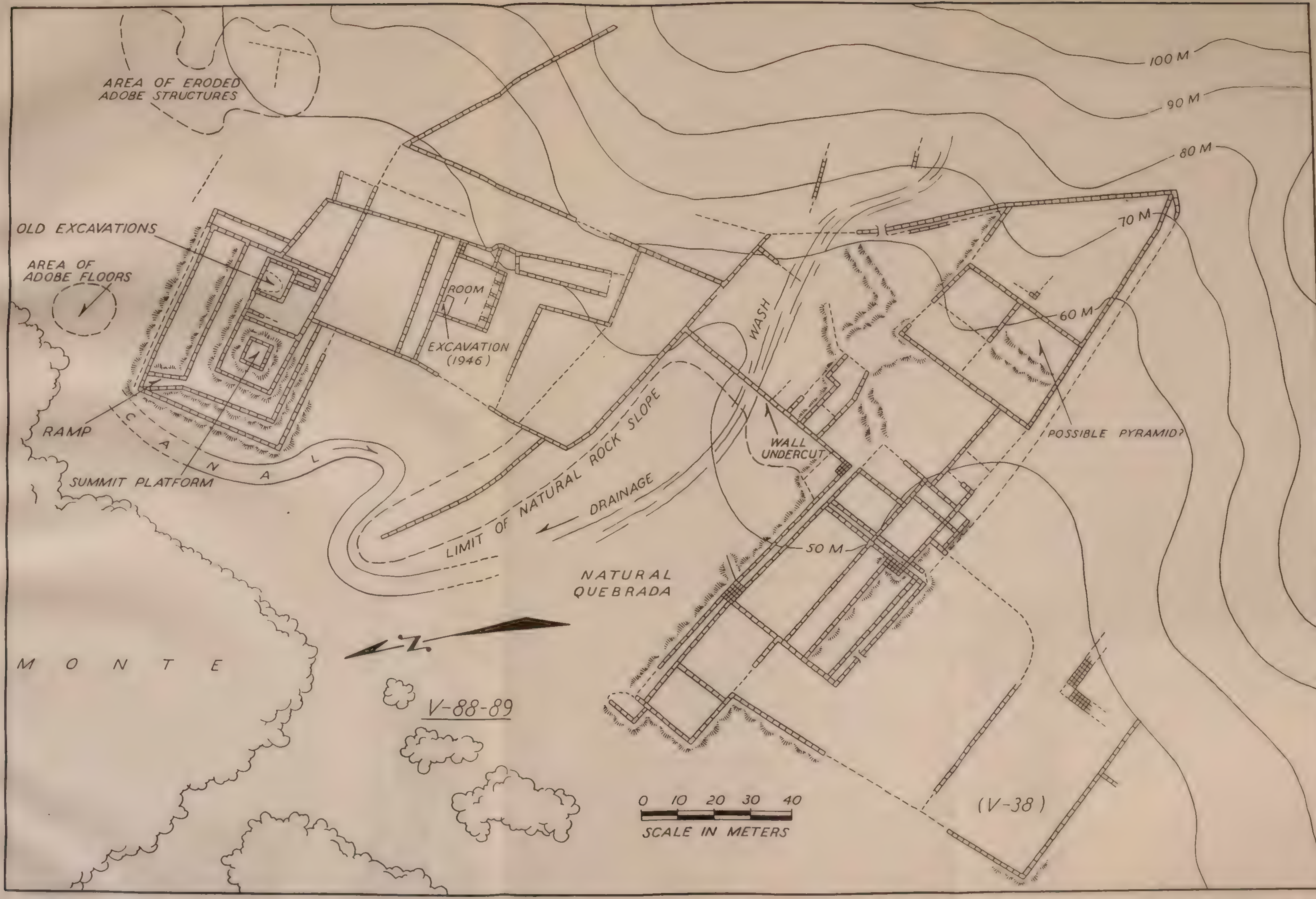

AREA OF ERODED ADOBE STRUCTURES
100 M
90 M
80 M
70 M
60 M
50 M
OLD EXCAVATIONS
AREA OF ADOBE FLOORS
ROOM I
EXCAVATION (1946)
WASH
WALL UNDERCUT
POSSIBLE PYRAMID?
RAMP
C A N A L
SUMMIT PLATFORM
LIMIT OF NATURAL ROCK SLOPE
DRAINAGE
NATURAL QUEBRADA
N
M O N T E
V-88-89
0 10 20 30 40
SCALE IN METERS
(V-38)

Figure 44.—Ground plan of Huancaco (V-88-89). Huge adobe Pyramid-Dwelling-Construction and "palace" Complex. V-88, the southern portion of the site, dates as Huancaco; V-89, the northern portion of the site, showed Middle and Late Gallinazo and Huancaco pottery. V-38 is Late Gallinazo.

or clay on the surface. A 3 by 5 meter excavation in the northwest corner of the room disclosed adobe bricks a few centimeters below the covering layer of melted adobes. These adobes were laid flat, without mud mortar, and ranged in size from 34 by 24 by 10 to 31 by 21 by 9 cm. All were of the plain, mold-made type. The stub of a large bamboo post was found to penetrate the adobes for only a few centimeters. Quite probably it had been a post for the suspension of some sort of shade or roof. Continued excavation revealed that the adobes were a part of a fill which had been used to cover an earlier architectural plan. Fragments of red and white plaster in and on the fill undoubtedly result from the destruction of the walls of the final building period. Beneath the adobe fill it was found that three short flights of steps descended into a prepared passageway which was a little over 1 meter in width (pl. 34, *top*, *right*). Walls were covered with a yellow-brown plaster, and the steps were also coated with a similar clay paste. The passage, to which the steps descend, is 1.4 meters below the top of the fill and slopes gradually to the west where it is blocked off by the adobe mass that makes up the upper part of the northwest wall of the room. This wall is clearly a later addition, most likely a part of the renovation that includes the fill overlying the stairs and stairwell. More extensive excavation would be necessary to follow out the stairs and passage of the earlier construction phase, but the small amount which we cleared suggests that superimposed building is common at Huancaco.

The V–88 section of Huancaco has no pyramid structure which can be definitely identified as such. At the upper part of the site there is a steep hummock in one of the large platform rooms that may, possibly, be a small pyramid. It appears as a badly melted adobe mass, but this may have resulted from collapsed walls as no terrace features can be made out. For the most part, V–88 is composed of large rooms (pl. 31, *center*, *bottom*). Along the front of the building the outer walls are massive and steep (pl. 30, *center*, *bottom*). In some places they rise 7 or 8 meters above the floor of the desert, and at base they are 2 meters thick. All are made of tightly packed adobes; all taper toward the top; and all are somewhat inclined. The presence of buttresses along the bases of some of these walls has already been mentioned. At the point where a drainage wash has swept through the site the front wall of the building is undercut, forming a great arch.

One feature of V–88 is the double-wall or gallery which is seen on the northeast and southwest sides (pl. 32, *bottom*, *center*) of the main building group, and is also suggested along the outer up slope or back wall of the complex. These galleries averaged 3 meters in width, and their floor levels were considerably elevated above the outside ground. There is also a suggestion of such a gallery along the northeast face of the V–89 pyramid. Another feature is the small block or platform of solid adobes noted at three places in V–88. These are about 3 meters wide and from 6 to 4 meters in length. One is in the middle of a gallery; another in the corner of a room; and the third is built into and outside of the juncture of two main outside walls. In the latter case it may have served as a device to strengthen the corner of the building as it extends down the outside of the wall like a buttress. In the other two cases these platforms or columns cannot be easily explained.

It has been said that most of the rooms in V–88 are large. This is so as can be observed on the site map (fig. 44). There are also some small rooms and small interior corridors. The smallest of these rooms, along the southwest side of the building, are only 4 by 5 meters. Possibly, some of the larger rooms were subdivided with relatively narrow walls which have since disappeared.

Off to the southwest of V–88 are two enclosures or partial enclosures. The outermost of these has been designated as V–38. Within V–38 there is a fragment of a structure, no more than a corner, of very thick walls.

The dating on the Huancaco site is divided among a number of collections. From the platform rooms and galleries of V–88 there is a collection of over 600 sherds which Ford has placed in the Huancaco Period. From the courtyard closest to the main buildings off the southwest corner of V–88 there is a second collection of over 800 sherds dating as Huancaco. There is also a small Huancaco Period collection of 40-odd sherds from V–88–89, together, plus 47 sherds of the same period, taken from the excavation in Room 1 of V–89. Then, from the areas of the old eroded adobe buildings lying northeast of the V–89 pyramid there is a very large collection (1,258 sherds) which is Middle Gallinazo. From the terraces of the pyramid itself come 326 sherds datable as Late Gallinazo. Taken together, these collections indicate a beginning occupancy and construction as early as Middle Gallinazo. Perhaps at this time the now almost completely destroyed northeastern building groups were laid down. Following this, the pyramid of V–89 was probably begun in Late Gallinazo times and may have been added to during the Huancaco Period. Certainly it was in use during Huancaco as it has been incorporated into the total site complex, the remainder of which would appear to have been built as a Huancaco Period structure.

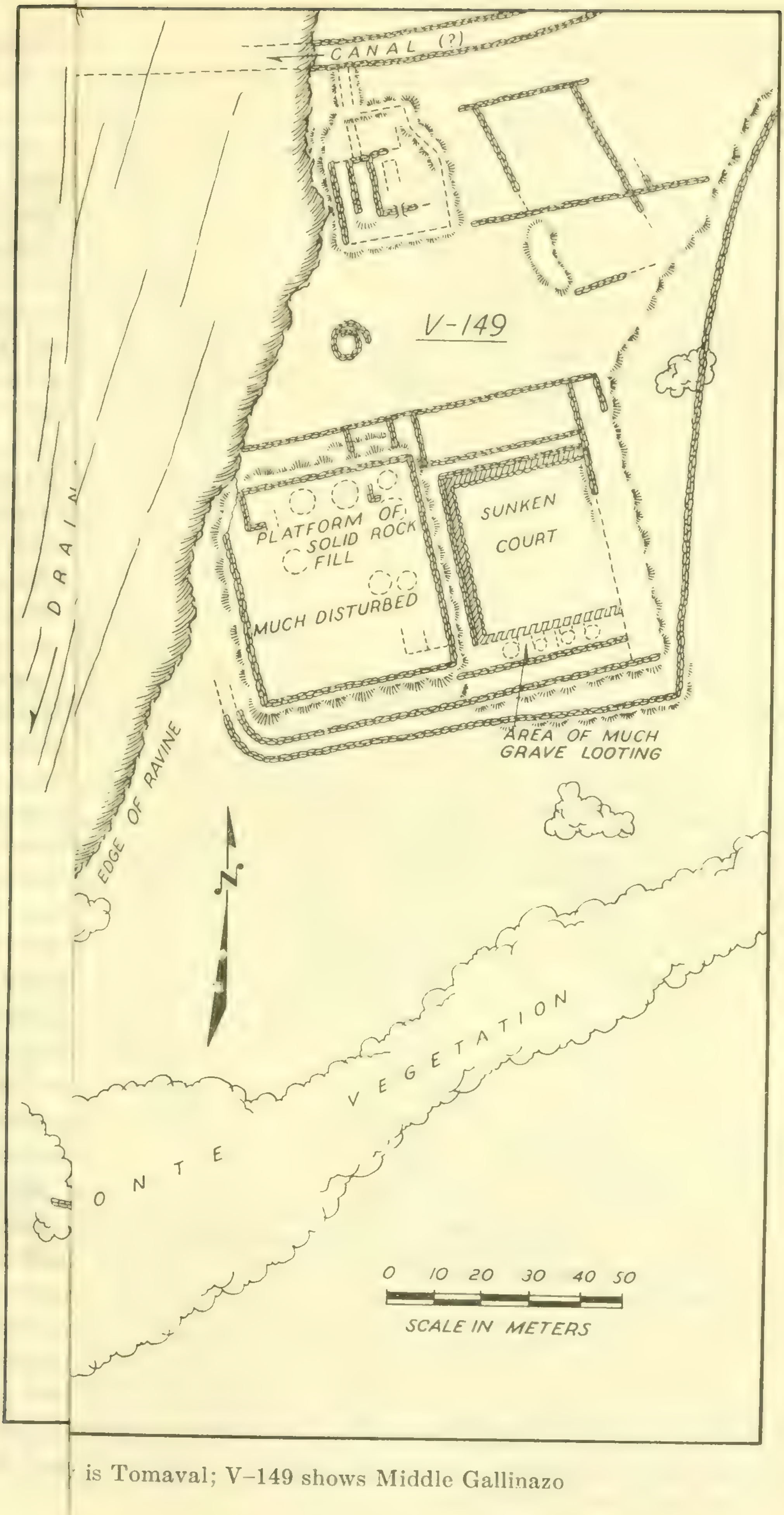
It will also be remembered that the midden areas of V–90 and V–91 are Huancaco as well as the Dwelling-Construction Mound, V–93. The midden area V–38, on the other hand, is Late Gallinazo.

V–149 (*El Gallo*).—Huaca El Gallo is in Huacapongo-North at the mouth of one of the largest ravines or quebradas that opens out of the bordering hills to the north (Quad F–2, northwest). It is, to the best of my knowledge, the largest mound in the Huacapongo drainage. Located on the rocky peneplain at the foot of the hills, it is over 100 meters from the present cultivation line. Some 80 meters up slope from it, however, is a prehistoric canal bed. This is one of the higher, if not the highest, of the ancient canals that flowed down the north side of the Huacapongo arm. Between the canal and the big mound there is a smaller mound, some rock-walled structures on the smaller mound, and some larger stone-wall enclosures near the smaller mound. All of these features have been included as a part of the site V–149. It is possible that V–149 and V–148 were once incorporated into the same large site complex by a series of enclosure walls (see map, fig. 45); but such connections, if they existed, have been destroyed by a more recent drainage wash, 60 meters or more in width, which has cut a 3-meter-deep channel between the two sites. Even if the two mounds, that of V–148 and V–149, were once related in some sort of an over-all ceremonial site plan, it appears, from the ceramic dating, that they were constructed in separate periods. Because of this V–148 is described separately under the Tomaval Period (see pp. 284–286).

The construction of the main and subsidiary mounds at V–149, as well as the associated wall foundations, are entirely of stone or earth-gravel fill. The large mound is completely covered with water-worn boulders, and it is possible that in some places these boulders were once set in position, as masonry cover. On mound summit there are such evidences. Now, however, due to much looting as well as erosion, the sides and top of the mound appear as a jumbled mass of rock. The interior of the big mound can be inspected in the face of a cut made by the deep ravine at the western end (pl. 28, *bottom*). An entire corner of the structure has been swept away here, and the mound fill is seen to be no more than loose dirt and small rock or gravel. This fill was then covered with boulders. No adobes were observed anywhere in connection with this mound as was the case with other rock-covered mounds of Middle Virú and Huacapongo.

The major mound at V–149 is a rectangular structure with its long axis oriented several degrees off an east-west line so that it actually sits east-northeast and west-southwest. The total layout is 93 by 63 meters. There are two principal parts. At the western half is the pyramid proper. It has an artificial height of between 3 and 4 meters, and measures 50 by 63 meters. The flanks slope up steeply on all sides. The summit is, in general, flat. The base of the mound is defined by stone walls on both the northerly and southerly sides. These wall remains are about 85 cm. wide and now stand less than 1 meter high. This was probably an encircling wall, as there is a suggestion that it continued across the western base of the mound. It cannot, though, be traced on this latter side. On the north and south sides the basal walls of the pyramid continue on to serve as the outer limits for the attached apron to be described presently. On both the north and south sides of the pyramid proper it was noted that there was a little space of from 2 to 4 meters between the basal walls and the beginning of the mound slope. Possibly there were small rooms in these spaces, and two partitions on the north side suggest this. The summit of the pyramid is well-defined by an outer wall. This summit measures 45 meters north-south and 41 meters east-west. The summit wall is of the usual double-faced technique and made of waterworn boulders. It is now virtually flush with the mound top, and is about 85 cm. wide. On the summit, at occasional intervals, are the remains of intersecting walls which run at right angles to the outer wall. Apparently, there were a number of rectangular rooms here, but these are impossible to follow out now because of the extensive grave pitting which has torn up the mound top. Judging from human bone scrap scattered about, burials have been found.

The other part of the structure is the apron or lower level which is on the east. Also 63 meters wide (north-south), it is 43 meters long (east-west). The apron has two high flanks, on the north and south sides. The south flank is 5 meters wide; the north flank 12 meters wide. These flanking ridges are the highest parts of the apron, being 1 meter or a little more above the surrounding ground level. Between the two flanks there is a large courtlike area which is marked on the map (fig. 45) as "sunken court." Actually, it is still a trifle higher than the ground level outside of the mound, but it is on a lower level than either the north or south flanks, the terrace steps below them, or a low ridge which runs across the east end of the court forming the eastern terminus of the total structure. Around the court, on its north, west, and south sides there are two low terraces or steplike benches which are intermediate in elevation between the flanks and the floor of the court. The uppermost of these is the wider, being over 5 meters on the south side although much narrower on the other sides. On the south side there is evidence that this upper terrace level had been divided into rock-walled rooms although these walls have been badly chopped up by *huaqueros*. Burials have, very obviously, been found on this terrace. The lower terrace is very narrow (1 meter plus) and is only 20 cm. above the courtyard floor. Its inner wall is a single row of stones, and its construction resembles that of the banquettes described for many of the houses of this and other periods.


CANAL (?)
V-149
PLATFORM OF SOLID ROCK FILL
MUCH DISTURBED
SUNKEN COURT
AREA OF MUCH GRAVE LOOTING
DRAIN
EDGE OF RAVINE
N
ONTE VEGETATION
0 10 20 30 40 50
SCALE IN METERS

is Tomaval; V–149 shows Middle Gallinazo

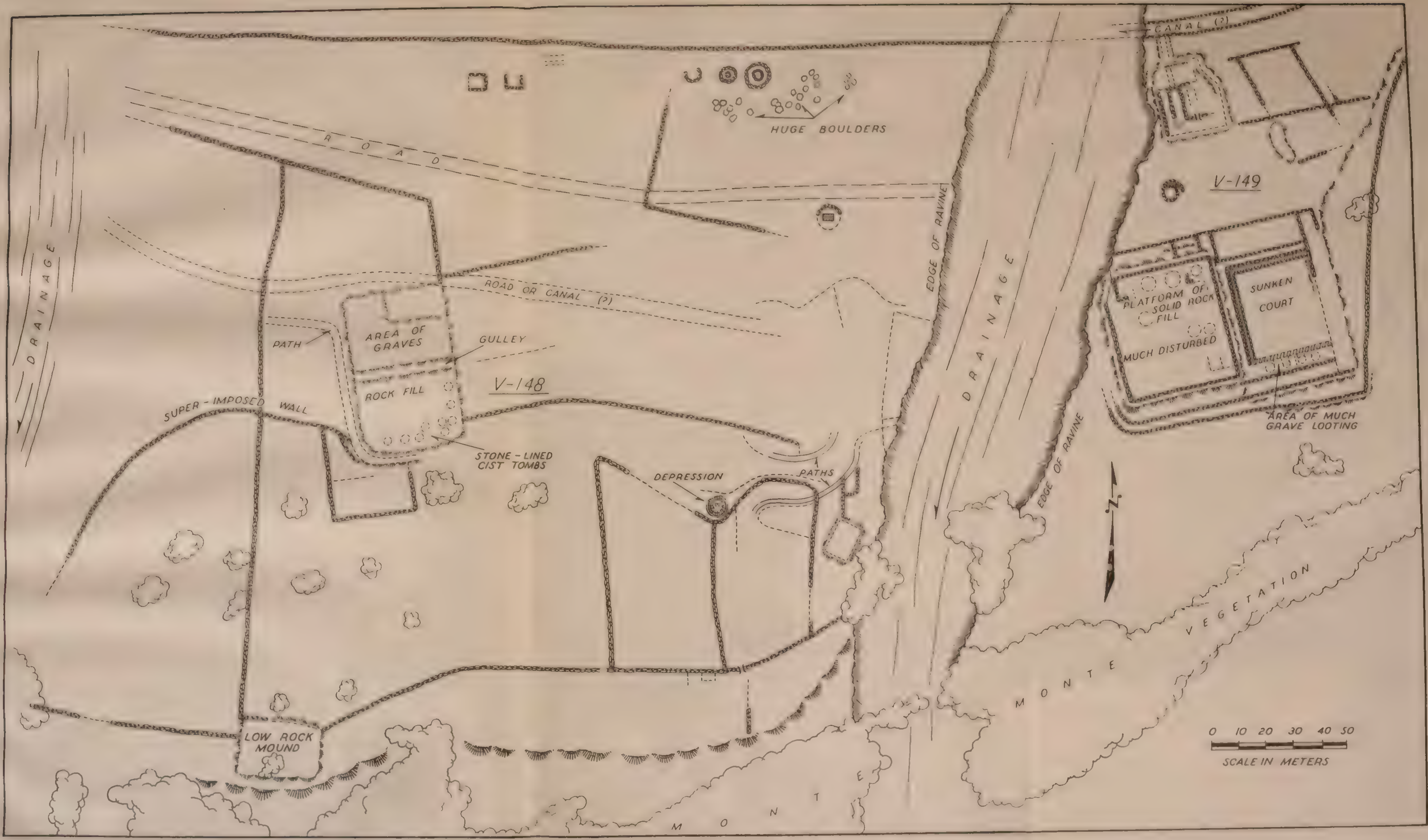

CANAL (?)
HUGE BOULDERS
ROAD
DRAINAGE
ROAD OR CANAL (?)
AREA OF GRAVES
PATH
GULLEY
ROCK FILL
V-148
SUPER-IMPOSED WALL
STONE-LINED CIST TOMBS
DEPRESSION
PATHS
EDGE OF RAVINE
DRAINAGE
EDGE OF RAVINE
V-149
PLATFORM OF SOLID ROCK FILL
MUCH DISTURBED
SUNKEN COURT
AREA OF MUCH GRAVE LOOTING
N
MONTE VEGETATION
LOW ROCK MOUND
MONTE
0 10 20 30 40 50
SCALE IN METERS

FIGURE 45.—Ground plan of V-148 and V-149. Earth and rock mounds, associated stone walls, and stone house foundations. V-148 pottery is Tomaval; V-149 shows Middle Gallinazo and Huancaco ceramic components.

955616 O - 53 (Face p. 212)

Additional features at V–149 include, first, an extensive enclosure (?) wall which begins off to the northeast and runs for over 100 meters to make a near-junction with the southeast corner of the main structure; from here it turns west and parallels the south base wall of the apron and the mound, turning with it around the west end of the pyramid. This wall may have been connected with the wall patterns seen to the north of the main structure although this connection could not be traced out.

Another interesting feature is a spiral wall foundation. It is less than 20 meters north of the basal wall of the pyramid. The wall is a typical double-faced, cyclopean type, about 80 cm. in width. It lies almost flush with the present ground level. Maximum diameter of the spiral is about 7 meters. In spiraling the walls are in complete contact, affording no aperture of entrance to the inside of the building, if it was a building.

The small mound is still farther to the north. Covered with rock, it is about 1 meter high. Not quite perfectly rectangular, it has maximum measurements of 27 by 29 meters. There are some stone-wall foundation patterns of rooms on the summit that are very incomplete. A narrow ridge of earth and small stones connects the small mound with the stone wall which forms the lower border of the old canal. This canal, about 5 meters wide, is also bordered with a stone wall on its upper side. At this point the canal passes around the foot of a steep hill spur. The canal and walls are cut off by the drainage wash (see fig. 45), but on the west side of the wash the lower wall continues although the canal ditch above it is no longer visible.

Just east of the small mound, and probably once connected to it, are some wall foundations. These form a large quadrangle, about 25 by 22 meters. Additional quadrangles or rooms appear to have been built here, but the patterns are now gone.

A large collection of almost 400 sherds, from the site at large, and a second collection of almost 300 sherds, from a small area at the northeast corner of the main structure, both date as Huancaco Period. A collection of 145 sherds was also made among the wall foundations east of the smaller mound. This collection is placed as Middle Gallinazo (see p. 140). From all this, the main structure would seem to date from Huancaco times, but earlier Gallinazo habitation or use may pertain to some of the structures at the site.

V–152 and V–153 (*Tres Huacas*).—These two sites (Quad B–4, northwest) form a Pyramid-Dwelling-Construction Complex built during the Gallinazo Period. The Huancaco Period sherds on the surface indicate a very superficial re-use for either occupation, burial, or both (see pp. 140–143).

V–155 (*Tres Huacas*).—This is a Gallinazo Period site (Quad B–4, northwest) from which occasional Huancaco Period graves have been reported (see pp. 143–145); it indicates very superficial re-use during the Huancaco Period.

V–166 (*Huaca Carranza*).—This is a small adobe pyramid with an irregular-shaped adobe platform attached. The presence of the latter has led me to include the site with the Pyramid-Dwelling-Construction Complexes rather than class it as an isolated pyramid. On the platform were evidences of rooms, probably dwellings. The site is located in Lower Virú-South, just inside the present cultivation boundary (Quad C–4, northeast).

The mound at V–166 is a steep-sided oblong pyramid with a small flat top (pl. 28, *center*). A small modern adobe building has been placed on this summit. The mound has basal measurements of 28 by 15 meters and summit platform measurements of 17 by 5 meters. It is 5.5 meters high. The structure is very well preserved, and there is no evidence of successful grave digging anywhere on or near it. The adobes of which the mound was made are rectangular, mold-made, and plain, measuring from 35 by 20 by 11 to 30 by 20 by 10 cm. At one place on the mound a fragment of red plaster was noted.

The orientation of the long axis of the mound is northwest-southeast. Attached to the southeast side of the mound is an L-shaped platform, about 2 meters in height, with the outside angle of the L being in contact with the southeast foot of the mound. The main bar of the L is 35 by 25 meters, and the smaller bar 20 by 10 meters. Rectangular room foundations could be seen on this platform at ground level. These rooms and the platform were of adobe.

A collection of over 160 sherds places the site as Huancaco.

V–280 (*Huaca Verde*).—Huaca Verde, situated in the cultivated part of the Valley, just one kilometer south of the famous Purpur cemetery (V–98), is, next to Huancaco proper, the most extensive site of the Huancaco Period in the Valley. The location is in the upper part of Lower Virú-North (Quad B–3, southeast).

In 1946 I spent only a half hour at this big site, and, unfortunately, did not map it. Its total extent was estimated as 300 by 200 meters; and the average height above the fields is 4 meters, with some mounds higher and parts of the connecting platforms lower than this figure. The site appears as a group of very closely spaced adobe mounds of the flat-topped pyramidal type. Platforms are attached to the mounds or connect one mound with another. In many cases the mounds were built toe-to-toe so that they now appear to be separated by little ravines or gulleys. The group is rather badly melted from ancient rains and the nature of the adobes is not readily evident, but in an old excavation, which cut 1.25 meters deep through a platform, plain rectangular adobes were visible. These range from 32 by 23 by 9 to 29 by 19 by 11 cm.

Huaca Verde was obviously an important center, probably of both a politico-religious and dwelling nature, for the Huancaco occupation of the valley. Its nearness to Purpur cemetery suggests that it was probably the site from which came the burials for that necropolis.

Three hundred and thirty-three sherds date as Huancaco Period.

ISOLATED PYRAMID MOUNDS

Explanatory note.—Like the mounds of the Gallinazo Period which were so classed, these are sites in which a single, flat-topped Pyramidal Mound stands by itself without immediately associated Dwelling-Construction Complexes. There are 16 such sites which date wholly or in part from the Huancaco Period. Seven of these are purely of the Huancaco Period, and were, as far as we can tell, built during this time. The remaining nine pyramidal mounds yielded surface pottery collections combining Huancaco components with earlier materials.

Of the total 16 sites, 7, both pure and mixed as to period, are adobe or adobe and earth mounds. The remainder, including both pure Huancaco and combined period sites, are the earth-rock mounds of the upper Middle and Huacapongo sections of the Valley.

The sites, in the order in which they are discussed, placing the adobe mounds first, are as follows:

V–92
V–95
V–167
V–168
V–245
V–276
V–288
V–141
V–187
V–188
V–196
V–199
V–200
V–206
V–208
V–230

V–92 (Huancaco No. 2).—This site is one of the most interesting in the entire Valley. It is an isolated adobe pyramid hidden in dense *monte* at the foot of a large stabilized sand dune (pl. 29, *top*). The location is in Lower Virú-South, 550 meters due north of the extreme northern tip of the pyramid structure of V–89 (Quad C–4, southeast). The surrounding soil is desert sand now covered with algarroba. I noted no evidences of occupational debris near the mound, although a detailed search was impossible because of the thick growth.

The basal diameter of the mound is about 20 meters, and it is a square structure. The summit platform, which has been largely destroyed by excavation, was probably about 7 meters square. Total artificial height is between 4 and 5 meters. The mound is constructed of rectangular, mold-made adobes some of which are plain and some of which are cane-marked. An average adobe size is 35 by 24 by 10 cm.

Excavations, made some years ago, cut across the mound in the form of two deep trenches. These cuts extend well down the flanks of the mound as well as across the summit. At the summit the excavations were widened to include a central square approximately 6 by 6 meters. This 6 by 6 meter area on mound top was carried down to 1.5 meters below the original summit. At this depth the excavators encountered prepared clay walls and a floor on which they stopped the larger excavation. The exploratory trenches were, however, carried down several meters more, probably to mound base.

On the prepared clay floor found in the mound summit excavation, the diggers had cleared a pedestallike altar or throne, probably the latter (see figs. 46 and 47). This throne, made of the same adobe types that constituted the pyramid, had been coated with white clay plaster (pl. 29, *center*). White plaster also had covered the walls of the throne room.

The throne had a rectangular base 2.64 by 2.16 meters and 1.18 meters high. This rectangular base is surmounted by a cylindrical pedestal which measures 1.6 meters in basal diameter, slopes slightly inward at the top, and is 72 cm. high. It is situated at the center of the longer dimension of the rectangular base, but is tangent to the westerly edge of this base. On the south side [44] of the rectangular base a flight of five steps (pl. 29, *bottom*) ascends in a west to east direction, turning northward for the last step. These stairs are 70 cm. wide and vary from 30 to less than 20 cm. in individual height. On top of the rectangular base, also on its south side, two more low steps ascend to the top of the cylindrical pedestal. These, reversing the direction of the stairs ascending to the top of the rectangular block, go from east to west. On top of the cylindrical pedestal, at its west side, are the remains of an arc-shaped low seat (?). This seat is almost 1 meter across and is, or was, about 30 cm. high. At the base of the seat, on its east side, there may have been another low step. Facing the pedestal and the seat, on the floor of the rectangular base, there is also a suggestion of another low step or raised area reaching from the pedestal to the east end of the rectangular base.

This fascinating construction, suggesting the Mochica ceramic representations of the thrones upon which dignitaries are seated (see pl. 60), must surely be a throne or altar room. Apparently the room was

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[44] Directions are approximate. According to my calculations the mound and the throne are not oriented with the cardinal points of the compass. It should be stated, however, that proper compass readings were not taken on this structure due to an oversight of the author. The direction arrow on fig. 46 was placed in afterward with reference to air and ground photos of the site.

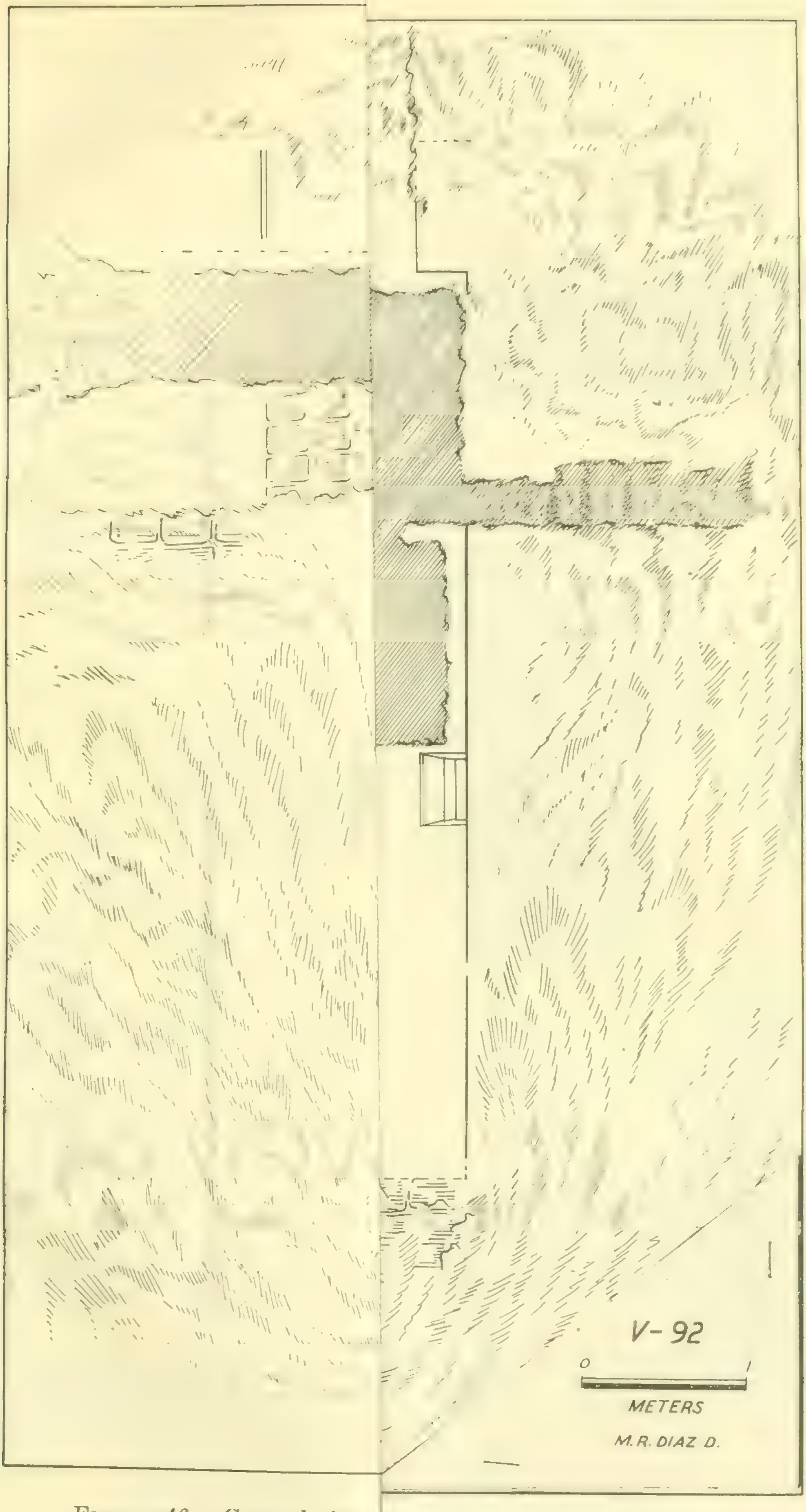
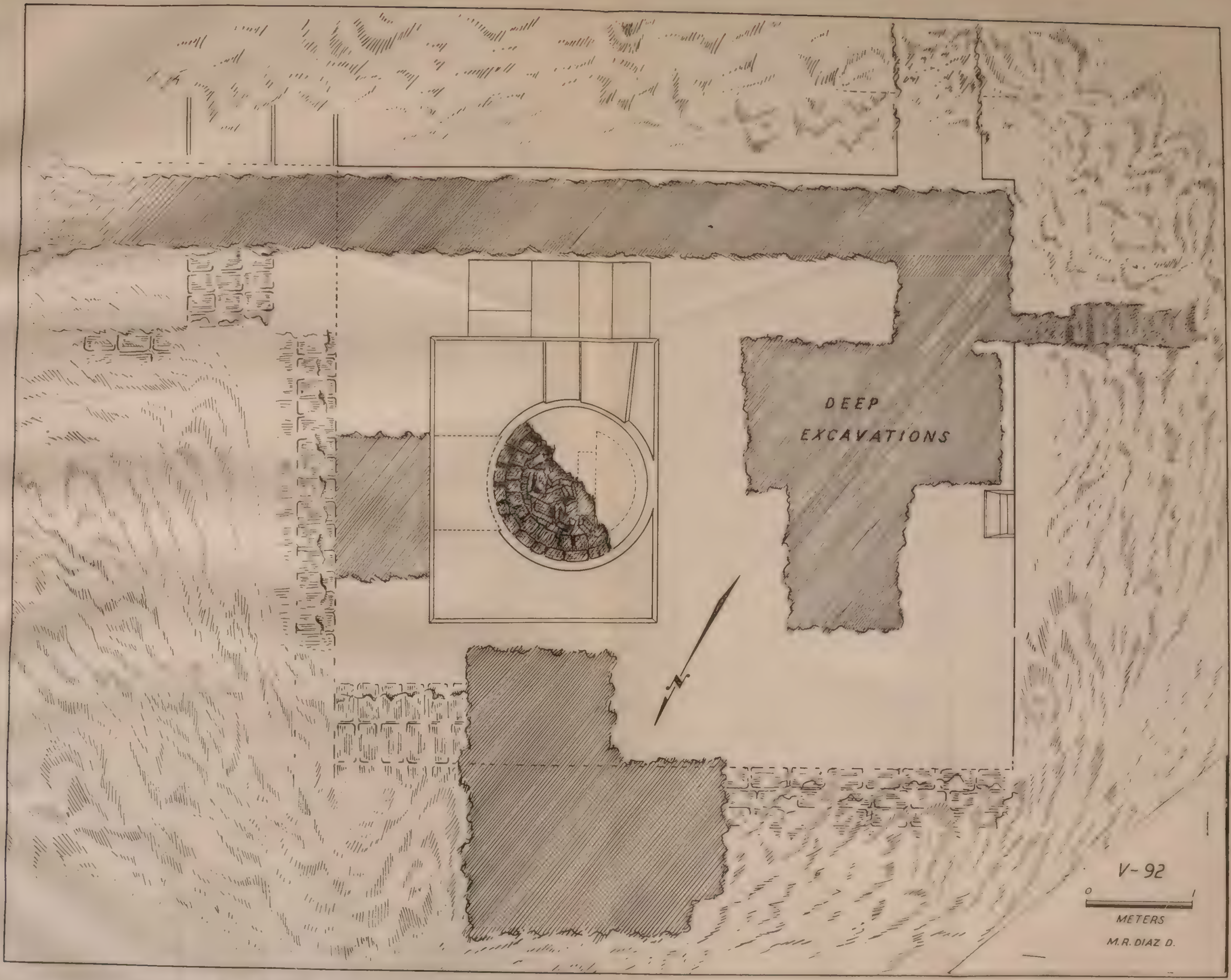

V-92
0
1
METERS
M.R. DIAZ D.

FIGURE 46.—Ground plan c summit platform upon which a
rec Period.


DEEP
EXCAVATIONS
V-92
0
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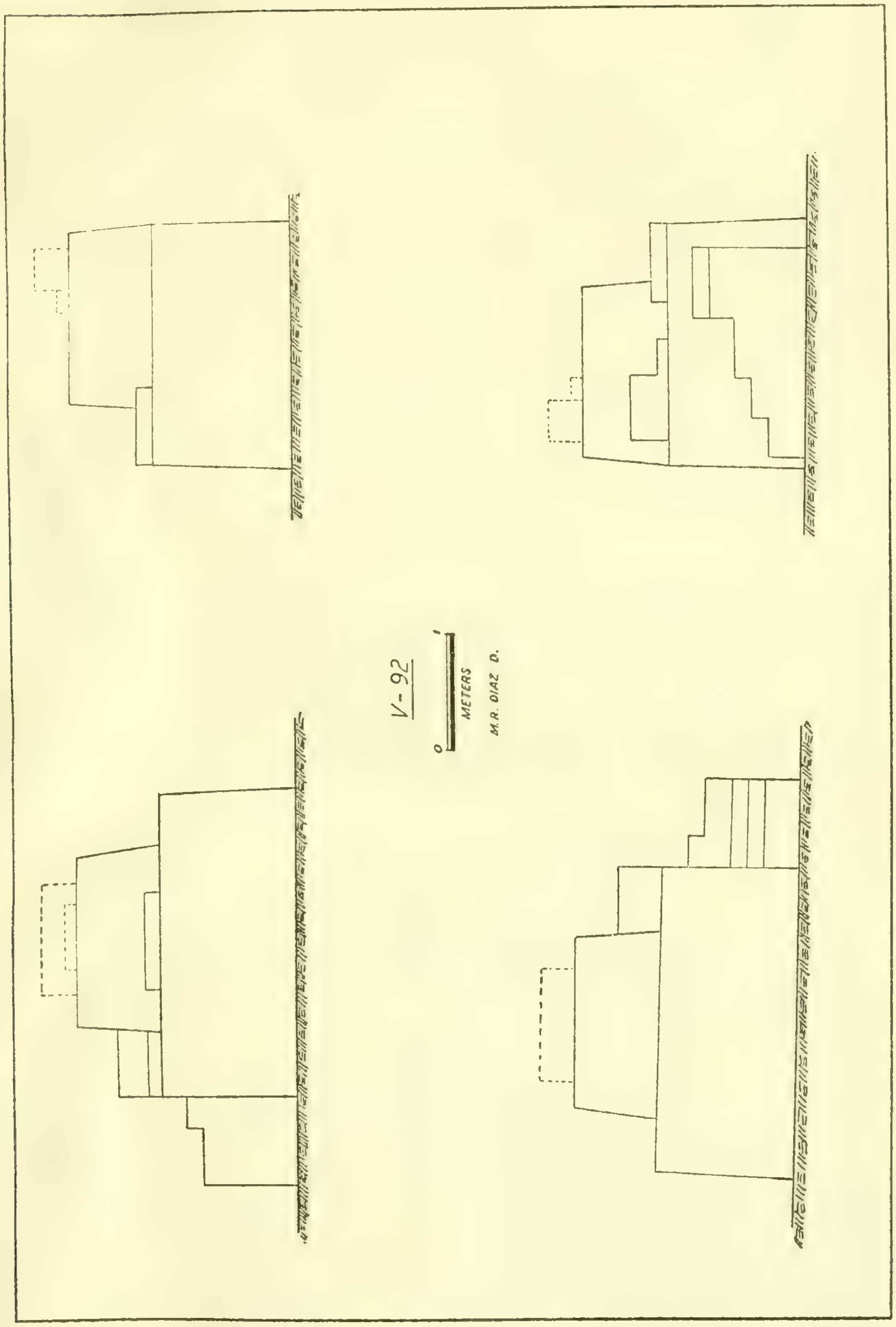
METERS
M.R. DIAZ D.

FIGURE 46.—Ground plan of summit structures of V–92. An old excavation into this adobe pyramid revealed an interior summit platform upon which a rectangular pedestal surmounted by a circular throne had been constructed. Dates as Huancaco Period.


V-92
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1
METERS
M.R. DIAZ D.

FIGURE 47.—Four side-views of pedestal and throne on V-92.

filled in with adobes when the pyramid was built to a higher level. Possibly, another such structure once existed on the pyramid top but has been destroyed. Here, as in many other cases in Peruvian archeology, it is to be regretted that the excavation of this site was not properly recorded.

Only a few sherds (40) were found by us at V–92, and Ford places these as Huancaco Period with the admonition that the validity of such dating is "poor." From its appearance, I think we can be almost certain that it is either a Huancaco or Late Gallinazo building.[45]

V–95.—This mound (Quad C–3, northwest) has been described under the Puerto Moorin Period (see p. 90). It is either an earth or adobe structure. Its date is questionable. It is possible that it was built entirely or in part during the Huancaco Period; or, on the other hand, it may only have been used superficially during Huancaco times. Tomaval material is also present at the site.

V–167.—This site, of two adobe mounds (Quad C–4, northeast), was probably constructed in Late Gallinazo times and is described under that period (see pp. 152–153). Collier, however, found both Huancaco and Tomaval refuse in the vicinity, suggesting later use of the mounds.

V–168.—This adobe mound is in Lower Virú-South in cultivated fields about one kilometer from the river (Quad D–4, northwest). Approximately 100 by 75 meters in extent, it is 4 meters high with steep sloping sides. The nature of the adobe construction is exposed on the sides. There is a large, deep depression, now much weathered, in the center of the mound. Is this aboriginal or a *huaquero* excavation? The adobes examined closely averaged 37 by 27 by 14 cm. and are cane-marked.

The dating of a large collection securely places the site as Huancaco Period.

V–245.—This is a mound in Lower Virú-North, in a cultivated area one and a half kilometers northwest of Hacienda Santa Elena (Quad B–3, southeast). It is 2 meters high, 35 by 18 meters at the base, and 26 by 9 meters at the summit. Orientation of the long axis is northeast-southwest. The mound is well-squared with evenly sloping sides. Its shape is almost conclusive evidence that it is a purposefully built pyramid. In an old excavation on the summit of the mound I noted a human femur, but there were no other evidences of grave-digging at the site. The construction material of the mound could not be determined from surface observations.

A collection of 100 sherds places it as Huancaco.

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[45] Special mention should be made here of Sr. Maximo Diaz D., former Director of the Museum at the Universidad de La Libertad, Trujillo. Sr. Diaz kindly consented to prepare field and finished drawings of V–92, and figures 46 and 47 are his work. I am most grateful to this Peruvian colleague for his assistance.

V-276.—This is probably one of the most northeasterly of a group of mounds which Bennett (1939, pp. 75–76) designated as "Ca-1" in "Potrero Cinco." The general location is Lower Virú-South on the Santa Elena-Carmelo road. The mound stands in a field just to the southwest of the road (Quad B–4, southeast).

The mound is 5 meters high, moderately steep, and sustains a considerable growth of monte on its large summit area. Leading off to the west of the mound is a tapering and sloping apron or ramplike extension. The construction has been much dug over, and most of the old holes show something like clay or tapia fill. I did note one fragment of a rectangular cane-marked adobe, however. Pottery fragments on the mound are common, and these are of the type to suggest grave ceramics although there were no other tomb evidences in sight on the surface.

A collection of over 200 sherds is dated as Huancaco Period.

V-288.—This may be another of the sites listed by Bennett (1939) under the survey number of "Ca-1." It is also on the Santa Elena-Carmelo road, less than a kilometer southwest of V–276 (Quad B–4, southeast).

As near as I could determine, this mound is circular in shape and about 100 meters in diameter at the base. The height is 6.5 meters above the fields. Lower portions of the mound appear to be made of clay fill or tapia, although this may be due to weathering. There were no deep excavations in the mound which could be examined for adobe types. However, the upper part of the mound was made of rectangular brick-shaped adobes. These all appeared to be plain rather than cane-marked; but, again, erosion may be a factor here. I also noted two odd-shaped adobes, possibly odontiform types.

In spite of numerous shallow pot holes dotting the surface of the mound I saw no good evidence for graves.

A few meters north of V–288 is the great aboriginal trans-Valley road (see pp. 370–371). At this point it is well-defined, 7 to 8 meters in width, and bordered on each side with tapia adobe walls (pl. 55, *bottom*). These walls are 65 cm. in width, but they are badly battered and eroded. It is most likely that the road dates from a later period than the Huancaco, and its relationship to V–288 is only fortuitous.

V–288 has a Huancaco Period sherd collection of over 100 sherds.

V-141.—This earth-rock mound, in Huacapongo-North (Quad F–2, northwest), has been described under the Puerto Moorin Period (pp. 82–84). It is questionable as to whether the Puerto Moorin or Huancaco component dates the mound. My guess is that it was built during the earlier period and used, and possibly added to, in Huancaco times.

V–187.—This is another earth-rock mound in Huacapongo-South (Quad G–1, southwest) which presents a dating problem. (See pp. 85–86 for description.) The graves in the summit are almost certainly of the Huancaco Period. I think it likely, though, that the mound was built, or at least begun, in the earlier Puerto Moorin Period.

V–188.—This earth-rock mound (Quad G–2, northwest), located very near V–187, is also a double component site. I have described it under the Puerto Moorin Period (p. 86). Summit graves in the mound, and possibly some of its construction, seem to be Huancaco.

V–196.—An earth-rock mound which appears to have been a pyramidal structure with a flat top. It is in Huancapongo-North (Quad F–2, northwest). The mound is located on the rocky flood plain between the bordering hills and Valley floor.

It is about 3 meters high. Its base is probably circular; in any event its rectangularity could not be determined. At the base it has a diameter of about 30 meters. The summit is small but well defined, being about 18 meters in diameter. On the summit there is a stone foundation, of a double-faced type which measures 12 by 5 meters. This foundation is oriented with the short axis on a north-south line. At the center of the mound, on the south or down slope side, there is a long (22 meters), narrow (6 meters) approach or ramp leading from ground level to the summit platform. On this ramp there is a path, 2 meters wide, which is lined on each side with a single row of large boulders.

Sherds were very scarce around the mound. A small collection has a component of 39 fragments which Ford places as Huancaco with the admonition that the validity of the dating is "poor."

V–199.—This is another earth-rock mound in Huacapongo (Quad G–2, northwest) which divides in ceramic dating between Puerto Moorin and Huancaco. It has been described under the earlier period (p. 87). My feeling is that it was built in Puerto Moorin but may have been used again in Huancaco.

V–200.—The situation here is similar to that for V–199. This mound (Quad G–2, northwest) has been described under the Puerto Moorin Period (pp. 87–88), but it was also used in Huancaco and Tomaval.

V–206 (Corral Gate Mound).—Again, this is a situation similar to V–199 and V–200. This mound (Quad E–1, southeast) (pl. 47, *center, left*), from its interior construction of conical adobes, has been judged to belong to the Puerto Moorin Period (see pp. 88–89). Besides the Puerto Moorin ceramic component, there is also a Huancaco collection from the site. It is most likely that the latter dates intrusive graves or re-use.

V–208.—In the Valley bottom flats of Huacapongo-South there is a little flat-topped mound with a small terrace or apron (Quad E–2, northeast). It is 1.2 meters high, 13 meters long, and 12 meters wide. The long axis is oriented northwest-southeast. On the southeast, or east-southeast, side there is a little apron, half as high as the mound proper, which is 8 meters long and 7 meters wide. The surface of the mound is covered with small boulders, and these may have been used, along with earth, for its total construction.

A collection of over 100 sherds places the mound as Huancaco Period.

V–230.—Like several other sites described in this section, this is an earth-rock, flat-topped mound which has both Puerto Moorin and Huancaco components (Quad G–2, northwest). It has been described under the earlier period (p. 89). I am of the opinion that it was built during Puerto Moorin and used later for graves or buildings.

EARTH-REFUSE MOUNDS

Explanatory note.—Mounds of this class for the Huancaco Period are the same as those for all preceding periods. Found in the lower portions of the Valley where natural stone is scarce, they probably derive from occupational accumulations, from scrapings of *salitre*-impregnated earth, or both. I feel that they are, for the most part, functionally comparable to small dwelling sites.

There are 11 Earth-Refuse Mounds which can be attributed in whole or in part to the Huancaco Period. These are:

V–236
V–242
V–248
V–260
V–261
V–271
V–272
V–287
V–291
V–302
V–308

All except V–242, V–248, and V–271 are mixed sites.

V–236.—A midden or earth accumulation on an old dune (Quad D–4, northwest) (see pp. 91, 289). Huancaco Period refuse is represented here along with earlier and later periods.

V–242.—A small mound in the Santa Elena district of Lower Virú-North (Quad C–3, southwest). It is of an irregular ovoid shape with a diameter of about 30 meters. It stands 1.75 meters above the fields. A roadway cuts one side of the mound, and Ford and I cleared this face, observing artificially deposited sand and clay with charcoal inclusions and refuse from top to bottom.

Most of the sherds which we obtained came from this little test cut. This small sample (30) dates as Huancaco Period.

V–248.—This is one of the mounds in the group just north of Hacienda Santa Elena (Quad C–3, southwest) (pl. 17, *second row, left*). The mound is 20 meters in diameter, vaguely square, and has a summit about 10 by 10 meters. Total height above the fields is 1 meter.

This could, possibly, be a low Pyramidal Mound, judging by its shape; however, the evidence is not conclusive enough to so class it. There are a few old pits on the surface, and in one I saw an adult human tibia.

A collection of 64 sherds dates the mound as Huancaco.

V–260 and V–261.—These are small Earth-Refuse Mounds in Quad B–4, southwest. Both show a mixture of Late Gallinazo (see p. 156 for descriptions) and Huancaco sherds.

V–271.—This mound is in Lower Virú-North, south and east of Hacienda Santa Elena (Quad C–4, northwest). It is 1.6 meters high, circular in outline, and has a diameter of 20 meters. Several old excavations reveal sherds and rubbish down for a depth of 1 meter in the mound.

Another small mound, not recorded but of about the same size and appearance, lies 20 meters south of V–271.

The V–271 collection of 78 specimens places the mound as Huancaco.

V–272.—This mound, in Quad C–4, northwest, was described on pages 53–54, 157. There are, among the other components represented, Huancaco burials in its summit (Collier, personal communication).

V–287 (*Potrero Cinco*).—About one-half kilometer east of the Hacienda Carmelo, not far from the river, there is a mound 2.5 meters high and 30 by 18 meters at the base (Quad B–4, northeast). It is one of a group of similar mounds. Bennett (1939, pp. 75–76) made a test into one of these mounds and surface collections from others. He surveyed them under the designation "Ca–1."

The mound V–287 is covered with refuse, and although the sides are rather steep there is nothing to lead one to believe it to be a dwelling-construction or pyramidal type tumulus.

Ford and I made a collection of 111 sherds from here which he has classified as Tomaval Period; however, Bennett's earlier work of 1936 indicates that the Huancaco Period is also represented at the site.

V–291 (*Carmelo Hacienda, Mound No. 1*).—This is one of the three low mounds very near to the main buildings of Hacienda Carmelo (Quad B–5, northeast). Bennett lists these three sites under the designation "Ca–3" (Bennett, 1939, p. 76).

The mound is oval in shape, being 35 by 20 meters in extent and about 2.1 meters high. Sherds and shell were scattered over the surface, but I could find no evidence of adobe construction anywhere on the site.

Our collection includes Huancaco, Tomaval, and La Plata Period components; Bennett's 1936 work verifies this as he found Huancaco (Early Chimu) materials at "Ca–3."

V–302.—One of the small Earth-Refuse Mounds dug by Collier in Lower Virú-North (Quad C–4, northwest) (see pp. 54, 157). Huancaco Period refuse was found here in stratified deposits along with earlier and later materials.

V–308.—Another small site excavated by Collier in the same vicinity as V–302 (Quad C–4, northeast). Huancaco burials were found intrusive into Gallinazo Period refuse (see p. 157).

COMMUNITY BUILDINGS

Explanatory note.—There are three structures in Virú which we examined in our survey which deserve special mention apart from the other site categories. These are large, rock-walled rectangles without interior room divisions. In their simplicity and size they bear some resemblance to the quadrangular temple of the Guañape Period found by Strong and Evans at V–71 (see pp. 55–57). Their construction, however, differs from that building in that the walls of all three are made by the double-faced, cyclopean technique which is characteristic of dwelling sites of nearly all periods of occupation in the Virú Valley.

It is questionable if these buildings were ever roofed. If so, they would have needed a series of interior vertical post supports to sustain the roof. Such supports as well as the roof would have been made of materials long since destroyed. Because of their distinctive size it is reasonable to believe that these buildings served some public function and were not simple dwellings.

One (V–51) seems to date wholly from the Huancaco Period; the other two have Huancaco ceramic components in association with other period materials. On the basis of present evidence I interpret them as being Huancaco Period structures.

V–20.—V–20 is located on the rocky outwash plain which descends to the north of the main buildings of Hacienda Tomaval (Quad E–1, southeast). The walls of this quadrangle are 1 meter wide and of double-faced cyclopean masonry with core fill of small rock rubble. In some places the walls still stand as high as 1.5 meters.

There are no interior partitions observable, and the floor of the building is the scoured, rock-strewn peneplain floor.

The building is oriented with the long axis just 10 degrees east of north. Walls measure as follows: north side, 37.4 meters; south side, 37.2 meters; east side, 51.9 meters; and west side, 55.4 meters.

A small collection from the walls and interior of the building ranges from Early Gallinazo through Tomaval. As previously stated, I think it most likely that the building dates from the Huancaco Period.

V–28.—This quadrangle is also in the Huacapongo area, north side (Quad E–1, southeast). It is located on the rocky outwash plain in the midst of dwelling sites, ancient canal routes, walls, etc. (map, fig. 51). It is much less well preserved than V–20. Walls exist only as low foundation traces. Along the south wall there are some faint traces of what might have been very small interior compartments. In the south wall there is also what appears to be a small doorway. Cutting across the southeast corner (see map, fig. 51) is a pathway which may, or may not, be ancient. The north wall is incomplete, presumably from flood destruction. Attached to this north wall is a stub of another wall running north at right angles.

The interior of the quadrangle is relatively clear of large rock and is the natural floor of the slope.

The walls measure as follows: north side, 41 meters; south side, 37 meters; east side, 47.5 meters; and west side, 50 meters. The long axis of the building is oriented just 7 degrees east of north.

The pottery collection from here is predominantly Huancaco (102 sherds) with a small (19 sherds) Early Puerto Moorin component.

V–51 (*Castillo de Tomaval*).—The castillo and dwelling sites at V–51 (Quad E–2, southwest) have been described separately (pp. 116–118 and 160–165). The great quadrangle at V–51 lies on an old geological terrace below the castillo proper but above the present Valley bottom (see fig. 32).

The quadrangle wall is about 50 cm. wide, and it exists now only as a low foundation. In 1946, Evans made a small trench in the interior south corner of the quadrangle. He followed the wall down for about 50 cm. below surface where it ended. The wall was made of unworked boulders set in mud mortar in cyclopean, double-faced style. Refuse continued down to a depth of 1.3 meters below surface or well below the base of the wall. He found no evidence of a prepared floor. It is Evans' belief that the original rock wall was no more than 75 cm. or 1 meter high.

The quadrangle is almost square and is oriented about 30 degrees off the cardinal points of the compass. Walls measure as follows: northeast side, 38.5 meters; southwest side, 35 meters; northwest side, 38 meters; and southeast side, 38 meters.

Evans found Huancaco Period sherds in the upper levels of the rubbish underlying and within the quadrangle walls. Only at the very bottom of his 1.3 meter cut did he encounter Gallinazo Period sherds. This would indicate a Huancaco Period date for the building.

CASTILLO FORTIFICATION COMPLEXES

V–62 (*Castillo de San Juan-Southeast*).—Castillo-type sites of the Huancaco Period are comparable to those of the preceding Gallinazo Period (see pp. 157 ff.) Site V–62 is actually a part of such a hill spur fortification that was begun during the Late Gallinazo phase.

The section designated as V–62 is a pyramid of superimposed adobe terraces which was constructed on the lower tip of the hill spur which borders Queneto quebrada on the northeast side.

According to the contour intervals made from air photos, the summit of V–62 is 200 meters above sea level or about 60 to 70 meters above the surrounding valley and quebrada floors. As will be seen from the map (fig. 23), the tip of the hill spur has a slight saddle which separates V–62 from the other structures on the ridge. As mentioned (pp. 158–160), V–62 was connected with V–16 by a rock wall which ascended the ridge on its crest. At the V–62 end, this wall connected with another stone wall running at right angles to it; and, as near as I could make out, this second wall, running transversely across the saddle, was connected to the stone-wall foundations of the V–62 structure (see fig. 23).

The V–62 structure is badly melted, and adobe talus covers its sides; however, exposed cross sections near the summit of the adobe mass show that rock walls, similar to those around the base, were used as reinforcing elements in some instances. The base, or estimated base, of V–62 is quadrangular. Its smaller diameter varies from 55 meters on the southeastern side to 37 meters on the northwestern; its longer diameter is, respectively, 64 and 60 meters to the side. Orientation of the long axis is northwest-southeast, and this follows the contours of the hill spur. The building appears to have been constructed in three terraces. The second terrace is adobe walled and in a fairly good state of preservation compared to the rest of the pyramid. It is almost square, being 26 by 27 meters; and it has an orientation which follows that of the lower terrace level. An upper terrace, smaller than the second, probably once existed, but this is now no more than a dome of melted adobe rising from 2 to 3 meters above the second terrace.

Small brick-shaped, mold-made, cane-marked adobes were used in the building. Some of these average about 38 by 26 by 13 cm.

At the foot of the pyramid, on the southeast side, there is an area about 30 meters in diameter which shows faint remains of stone-wall foundations. A thick stone wall extends down slope from this area for a short distance.

Ford's collection of 1,868 sherds from this site is dated as Huancaco Period.

V–67 (*Santa Clara*).—The ruin of Santa Clara is atop the second largest isolated hill in the Valley. This is the much eroded remnant which rises some 60 meters above the Valley floor immediately to the east of the Pueblo de Virú. In many ways this is the most advantageous location for a castillo-type site in the valley, being the only large and high hill which is centrally situated. Kroeber (1930, p.

77), Bennett (1939, p. 21), and Larco Hoyle (1938–39, vol. 1, p. 62) all refer to it.

Cerro Virú, the hill on which Huaca Santa Clara is situated, is a steep arid mass of dust and sand. Natural rock outcrops are exposed only in a few places along the base of the hill, but its great size indicates that the larger portion of its height and bulk is natural. Of a triangular shape, the base of the hill is a little over 300 meters to a side. As noted, it rises 60 meters above the nearby ground level, or, following the contour maps of Virú prepared from the air photos, its elevation is between 80 and 140 meters above sea level. The contour map shows this elevation as a steep but even ascent on all three sides of the hill.

It is difficult to judge the extent of artificial construction on the upper slopes and summit of the hill as the adobe buildings are much melted and eroded and there has been, relatively, only a little excavation. The first structures or rooms which we saw are located on the northwest corner of the hill between the 120- and 130-meter contour lines. These were small, conjoined adobe-walled rooms, (pl. 28, *top*), and they had been constructed to conform to the steep slope of the hillside. In one cluster there were six such rooms which had been cleared; nearby were two or three others. All appear now as subterranean or semisubterranean chambers, opening at the ground level; but it may be that they were all above-ground rooms which have subsequently been covered by refuse and eroded debris. Rooms which I measured ranged from 2 by 2.5 meters to 2.5 by 1.5 meters. Small niches were noted in the wall of one such room. The rooms were constructed of rectangular, mold-made adobes of the cane-marked variety. Adobes measured averaged 27 by 25 by 10 cm. Between the 130 and 140-meter contour lines, on the west side of the hill, there are evidences of adobe walls or terraces although these are very vaguely seen and very eroded. On the flat summit actual adobe constructions are no longer visible on the surface, but the appearance of the soil indicates that an adobe platform or series of terraced platforms had been built there. This eroded building was rectangular and probably measured 25 by 15 meters. Its long axis lay along the long axis of the hilltop, varying only slightly from a north-south orientation.

A pottery collection from the rooms and from the summit, numbering over 100 sherds, is placed as Huancaco Period.

Undoubtedly, this is one of the most important sites, from the standpoint of size, impressiveness, and location, in Virú. Its relatively untouched condition, the presence of adobe structures, and the abundance of refuse combine to make it a most favorable site for future excavation.

V–130.—This site is known in the literature (Bennett, 1939, pp. 22–23, 78) as both El Cerrito and Castillo del Inca. Today, the local inhabitants refer to it as Huancaquito. The location is in Lower Virú-South, near the river (Quad C–4, southwest).

The site is on a small outcrop hill which, except for Cerro Prieto, is closer to the sea than any other erosional remnant hill in the Lower Valley. It is also close to the river. The total area of the hill, or hills, is a cruciform, each arm of which is approximately 700 meters long and from 100 to 200 meters wide. V–130 is on the southern arm of the cross, a hill ridge which rises between 20 and 30 meters above the Valley floor. To the south and west of El Cerrito are cultivated fields, and to the north and east is largely uncultivated *monte* growth.

There are two parts to V–130 which we shall refer to as the upper and lower (see pp. 262–264) portions of the site. It is the upper, and less well-known section, with which we are concerned here.

On the summit ridge of the arm of the V–130 hill there is a rectangular platform of adobes. The principal part of the platform measures 62 by 22 meters (fig. 60). It is oriented north-south, but this seems to be to conform with the ridge top rather than as a result of any desire on the part of the builders for directional orientation. At the south end of the main platform there are less well-defined adobe platforms. The upper one of these is shapeless and eroded, but at its center it rises to the highest point on the ridge (as indicated by the 50-meter contour interval). The lower one is well below the crest of the other. It has been faced along its southwest side with a stone wall. Throughout, the construction of these platforms is with plain, rectangular adobes and occasional small, amorphous lump adobes. For the most part, the adobes seem to have been used to supplement or to square up the natural top of the rocky outcroppings of the ridge; and, in many places where the adobes have washed away, the rock shows through.

A collection of 250 sherds was gathered from V–130, as a whole. Most of the pottery came from the upper section of the site, the one just described. Ford dates the collection as Huancaco Period, average rating.

CEMETERIES

Explanatory note.—In contrast to the Gallinazo Period, there are a great many known sites of the Huancaco Period that seem to have served no other purposes than that of burial. These are open sites without above-ground structures. Most of them are well known to local people and have been much dug over in the past. The distinctiveness and beauty of Huancaco Period (Mochica) grave ceramics and their relative high commercial value, as compared with the pottery of other periods of the Valley's history, have intensified the search for cemeteries of this culture, and this is undoubtedly one of the reasons why so many Huancaco cemeteries are known. At the same time the native cultural factor may also enter here. Although cemetery burial in open area sites is known from all periods in the Virú, cemeteries are much more common from Huancaco and later periods. This is not entirely a matter of population increase as the preceding Gallinazo Period appears to have been about as populous as Huancaco. There is, thus, a suggestion that the burial mode shifted somewhat from Gallinazo to Huancaco and that in the earlier period burial in Earth-Refuse or Dwelling-Construction Mounds was more common than cemetery burial. Burial in mounds of this type continues in Huancaco but is probably less common.

In the Huancaco Period there are 11 pure cemetery sites. These are:

V–1
V–3
V–6
V–12
V–15
V–97
V–98
V–99
V–139
V–220
V–232

There are 12 mixed sites which served as Huancaco cemeteries at some time during their history. Some of these show mixture with cemeteries of other periods; some are mixed with occupations or dwelling sites of other periods; and some show a combination of both of these situations. The mixed cemeteries are:

V–11
V–51
V–64
V–96
V–102
V–109
V–126
V–129
V–133
V–135
V–146
V–186

I have not included in this section those many instances of Huancaco Period burials found in the Pyramid-Dwelling-Construction Complexes, in Dwelling-Construction Mounds, or in Earth-Refuse Mounds. In most cases of this sort Huancaco burials have been found to be superficial intrusions into earlier buildings or debris.

V–1, *V–3*, *and V–6*.—These are three cemeteries in the sandy plain just north of the outer cultivation line above the Hacienda San Ildefonso (Quad D–2, southwest). V–1 is usually referred to as "Cementerio San Ildefonso." The others are unnamed. V–1 is the largest of the three. Looted graves are found in an area 130 meters north-south by 75 meters east-west. I estimated some 200 grave holes. Only Huancaco burials have ever been reported from this site, and our two sherd collections from here verify this dating.

V–3 is only 30 meters in diameter, and looting here appeared less recent than in V–1. Huancaco burials are reported from here, and our collection of 81 sherds verifies this.

V–6 is encompassed in an even smaller area of about 15 meters diameter, but the site has been intensively cut through and, to judge from scattered debris, has yielded numerous burials. We were informed that these had been of the Mochica or Huancaco Period type, and a small collection which we made checks with this information.

V–12 (*San Francisco Cemetery*).—This is one of several sites that are included under this name. It lies just north of cultivation at the foot of a section of hills which jut out into the Valley about 2 kilometers due north of Virú Pueblo (Quad D–2, southeast). It appears to be about 200 by 400 meters in extent, although whether all of this area is attributable to the Huancaco Period is questionable. I noted some rectangular adobes scattered about the surface. Our very small collection dates as Huancaco Period.

V–15 (*San Juan Cemetery*).—This is a well-known and well-looted graveyard near the mouth of Queneto quebrada on the San Juan side (Quad E–2, northwest). The cemetery lies just below the V–16 castillo on the quebrada floor (fig. 23). An area of no more than 30 meters in diameter has been riddled with at least 40 pot holes, and from some of these skeletons and grave ceramics have been removed. A collection of about 100 sherds from the surface of this site is clearly Huancaco.

V–97.—This cemetery is in the desert at the present-day edge of *monte* at a distance of a little over one kilometer northwest of Hacienda San Ildefonso (Quad C–3, northeast). An area of about 75 meters in diameter has been thoroughly dug over, and there is abundant bone scrap and pottery scattered about. Graves seem to have been simple pits with no adobe lining. Our collection of 341 sherds is pure Huancaco.

V–98 (*Purpur Cemetery*) *and V–99.*—These are two cemetery sites in the desert between the great Purpur dune and the edge of the *monte* growth. V–98 is about one-half a kilometer south of the base of the dune, and V–99 lies almost one kilometer southwest of V–98 (Quad B–3, northeast). V–98 (Purpur Cemetery) is the most famous Mochica or Huancaco Period cemetery in the Virú Valley. Some years ago diggers are reported to have opened deep (3 to 4 meters) graves here and to have removed elaborate grave contents including several objects of gold. As noted in connection with the site V–280 (pp. 214–215), the Purpur Cemetery may have been the burial ground for this sizable Huancaco Period Pyramid-Dwelling-Construction Complex. V–280 is a little over one kilometer south of V–98.

The V–98 cemetery area is marked by nothing more than old excavations, now filled with drift sand, sherds, human bone scrap, and an occasional brick-shaped adobe. Two of the latter, which I measured, are 20 by 20 by 12 cm. and plain surfaced. There is evidence of grave digging over a zone about 100 by 30 meters.

A large surface collection from here is pure Huancaco.

V–99 lies within the edge of scattered algarroba growth. It is a big cemetery, covering an area of 300 by 150 meters. Graves seem to have been concentrated in little clusters within this area. The greatest grave concentration is in a small knoll which is 35 meters in diameter and 1 to 2 meters high. This knoll, now sand-covered, may be an artificial adobe construction; possibly, it is a Dwelling-Construction or Isolated Pyramidal Mound. It has been intensively cut through by diggers, and it contains, or contained, numerous adobe-lined graves. The adobes which I saw were all rectangular and plain. They averaged about 38 by 25 by 11 cm.

A collection of grave pottery dates as pure Huancaco Period.

V–139.—This is a small cemetery on an old beach dune (Quad C–6, northwest) (pl. 27, *top*). The site is also a midden, and it has been so described (p. 201). Both cemetery and occupation date as Huancaco.

V–220.—This cemetery is on the lower flanks of the northeast side of Cerro Sarraque (Quad E–2, northeast). It has been intensively looted, and I noticed about 200 grave pits within an area of 100 by 60 meters. Bone scrap and sherds are abundant, and there is a good bit of small rock scattered through the churned earth. Possibly these stones were used as linings to grave pits. I saw no adobes. A large surface collection is Huancaco in date.

V–232 (*Virú Viejo Cemetery*).—This cemetery is located on a small natural sand hill or dune just south of Virú Viejo hill and castillo (see p. 175) (Quad E–2, northwest). Graves, not very numerous, have been excavated over an area of 175 by 50 meters. Plain rectangular adobes are seen scattered about, and, presumably, these came from grave linings. They average 33 by 23 by 10 cm. A modest-sized pottery collection from the site places it as Huancaco.

V–11 (*San Francisco Cemetery*).—This is one of the San Francisco Cemeteries (Quad D–2, southeast). The site has been mentioned as a Puerto Moorin Period (Early) midden (p. 179). The cemetery section, which dates from the Huancaco and Tomaval Periods, is some 100 by 30 meters in extent. There are some rock walls and some wall remains of rectangular adobes nearby. These may date from the Huancaco Period, but this is uncertain.

V–51 (*Castillo de Tomaval*).—This site (Quad E–2, southwest) has been described in detail as a castillo, a community, and with reference to a large, stone-walled rectangle (pp. 160–165, 116–118, and 224). It is also a well-known cemetery of the Huancaco Period.

There are several cemeteries in the V–51 zone, but the one best known for its Mochica (Huancaco Period) pottery lies at the foot of the castillo on its northwest side. The area of this cemetery is only 20 to 30 meters in diameter. As far as I could tell, most of it is outside of the stone enclosure wall (see fig. 31). Strong and Evans did some digging in this cemetery in 1946, and their work attests to its Huancaco date although they found no elaborate materials. But the cemetery is noted for its Mochica-type burials, and there is little reason to doubt this dating assignment. Tomaval Period burials are also said to have come from the same cemetery area.

About 60 meters west of the cemetery described is another and larger one. It, too, is reputed to be largely of the Huancaco Period. Some distance to the northwest, bordering a small drainage quebrada which slices through the northern end of the occupation site, there are two other cemetery areas. There seems to be little information on these.

V–64.—This large midden site was mentioned under the Puerto Moorin Period (p. 79). It was also occupied in Tomaval times, and it was used as a cemetery area in the Huancaco Period. It is located on the southeast side of the Valley on a sand ridge just outside of cultivation (Quad E–3, southwest). The midden refuse is found along the ridge for almost a full kilometer. At one end, near the terminus of the road that leads into Virú Pueblo, there is a looted cemetery about 40 by 100 meters in extent. This is the Huancaco Period part of the site. Within the cemetery zone there are the remains of two or three adobe structures. All are found in little depressions or pockets, and it seems likely that they were adobe-lined tombs that had been opened and subsequently eroded and filled with drift sand. The adobes are rectangular and mold-made, but the ones I saw were too weathered to determine if they were plain or cane-marked.

The dating of the cemetery as Huancaco is attested to by over 1,000 sherds.

V–96 (*The Carretera Cemetery*).—At the edge of the scrub growth in Lower Virú-North, not more than 400 meters south of the Pan-American Highway (Quad C–3, northwest), is a cemetery area of some 50 grave pits. These are scattered over a zone 200 meters by 50 meters in extent.

An interesting feature of the site is an old adobe wall, probably prehistoric, which runs directly through the graveyard. The wall is composed of rectangular, mold-made, plain adobes which average 30 by 15 by 10 cm. The wall now measures from 40 to 75 cm. in width and still stands about 50 cm. above the desert floor. The wall parallels the Valley and the present *monte* line, extending intermittently for several hundred meters down-Valley from V–96 and about two kilometers up-Valley from the site. On the air maps it can be seen to fit in with the old land utilization patterns in what is now the marginal or scrub growth zone of this side of the Valley. The nearest active cultivation is now about 800 meters from the wall.

That this marginal zone was once cultivated is attested to by sections of old canals that can be seen in the open desert and in the *monte* between V–96 and V–97 (Quad C–3, northeast). The latter also lies at the edge of *monte* three kilometers east-northeast of V–96.

The dating of V–96 is both Huancaco and Tomaval. Apparently, the site was used as a burial place in both periods.

V–102.—(See p. 196.) This cemetery area is in a dwelling site of the Huancaco Period (Quad E–2, southwest).

V–109.—(See p. 176). This is a combined Middle and Late Gallinazo and Huancaco cemetery (Quad C–4, southeast).

V–126.—(See p. 178). This is an Early Puerto Moorin dwelling site which had been re-used as a Huancaco cemetery (Quad C–4, southeast).

V–129 (*El Cerrito or Huancaquito Cemetery*).—This is a much-excavated cemetery which lies in the embrasure of the hill of Huancaquito and the adjoining hills to the north. The area is Lower Virú-South, and the small isolated hills in question are on the edge of modern cultivation (Quad C–4, southwest).

The area of the cemetery is about 150 by 30 meters. The soil is dirt rather than sand. Some 75 grave pits have been opened. Apparently, most of these were pit graves, but there are a few adobes scattered about the surface which would indicate that some of the tombs were adobe-lined. Adobes are rectangular and plain. The only one which I measured is 47 by 27 by 10 cm.

Pottery from this site includes Early Puerto Moorin, which probably represents an earlier village occupation (see p. 79), and Huancaco and Tomaval grave fragments.

V–133 (*Cerro del Piño—South Cemetery*).—On the south slope of the isolated hill, Cerro del Piño, there is a cemetery lying between the great natural rock dike that traverses that end of the hill and the *monte* scrub line below (Quad C–5, northwest). The area of the cemetery, about 100 by 50 meters, has been much dug over. Near the western end of the cemetery a part of an adobe room has been revealed. This room must have measured at least 5 by 2 meters. The walls of the room are of tapia construction, show horizontal cane markings on the interior surfaces, and were built in sections of varying lengths. The average tapia section is about 1.6 meters long. Wall width averages about 55 cm. Another exposed corner of a construction extrudes from the sandy hill slope just a little to the east of the room described. The walls of this second room or building have been built up of rectangular cane-marked adobes which average about 46 by 26 by 15 cm.

It is not clear just what these two constructions were. They seem too large for adobe-lined tombs. It is most likely that they were dwellings abandoned in an area later used as a cemetery. The nature of their construction argues against their occupation in Late Guañape times. Possibly, they were Gallinazo Period buildings, but if so there is no ceramic component at the site which represents this period. It may be that they are of the Huancaco Period although the construction described, particularly the tapia, is more like that known for Early or Middle Gallinazo.

There are two ceramic components from this site. The earlier, Late Guañape, is believed to represent an old village and some burials; the later, Huancaco, represents the bulk of the cemetery.

V–135 (*Cerro del Piño—West Cemetery*).—This is a cemetery on the west flank of the cerro (Quad C–5, northwest). It has an area of 150 by 75 meters with about 75 old *huaquero* pits. Ford's collection from here is Huancaco Period. I would supplement this by noting that I observed Tomaval Period sherds near some grave pits.

V–146.—This is a hillside group of houses (Quad E–1, southeast) dated as Early Puerto Moorin (see p. 77). Huancaco and later period burials were found in the area.

V–186.—In Upper Huacapongo, on the south side of the Valley, there is a semi-isolated hill or hill spur with a flat circular crown about 30 meter in diameter (Quad F–2, southeast). It has been completely dug over, and, obviously, is a cemetery. An old canal winds around the foot of the hill. Along the west side of the hill crown there is a stone retaining wall which suggests that the hilltop had been artificially dressed. Whether this building dates from the earlier (Early Puerto Moorin) use of the site or the later (Huancaco) use is an open question. At the foot of the hill, on one side, are some faint rock alinements which may be old house foundations.

Puerto Moorin sherds come from the rock alinements at the foot of the hill and some are also found on the hill crown. The grave pottery on the hilltop is clearly of the Huancaco Period.

TABULAR SUMMARY OF SITE TYPES OF THE HUANCACO PERIOD

Living sites:	
Exposed Dwelling Sites:	
Agglutinated Villages:	
Irregular Arrangement	10
Regular Arrangement	3
Either Regular or Irregular Arrangement	1
Semi-isolated Large Houses	5
Compound Villages: Rectangular Enclosure (two of these dubious)	3

TABULAR SUMMARY OF SITE TYPES OF THE HUANCACO PERIOD—CON.

Living sites—Continued	
Dwelling-Construction Mounds	10
Midden accumulations	14
Earth-Refuse Mounds	11
Community or ceremonial structures:	
Isolated Pyramid Mounds	16
Pyramid-Dwelling-Construction Complexes	8
Community Buildings	3
Fortified strongholds or places of refuge: Castillo Fortification Complexes	3
Cemeteries	23

THE TOMAVAL PERIOD

PERIOD DEFINITION

The Tomaval Period of the Valley's prehistory, "time E-D" on Ford's charts (1949, figs. 4, 5), is estimated to be about two-thirds as long as one of the standard Gallinazo or Puerto Moorin subperiods. This is twice the time duration of the very brief Huancaco Period. Tomaval is treated as a single period without phase subdivisions.

According to Ford (1949, pp. 66–69), the change from Huancaco to Tomaval is the most drastic shift in ceramic traditions in the entire Virú sequence. Strong outside cultural influences or a change in Valley population are postulated.

In spite of these changes, there are some ceramic continuities with the past. The period is dominated by Black ware. This is in striking contrast to Gallinazo and Huancaco Periods, but it will be recalled that the black types, Tomaval Plain and Queneto Polished Plain, were minor pottery elements as early as Gallinazo. It is in the Tomaval Period, however, that Black, reduced pottery becomes predominant and also displays a host of new vessel forms. There are other continuities. Paralleling the increase of Tomaval and Queneto Plain, the type, Virú Plain, also expands and apparently replaces the dying type, Valle Plain. A significant new type, Estero Plain, makes its appearance in Tomaval.

There are a new series of decorated types, and in these the emphasis is upon mold decoration, not painting. San Juan Moulded, a Black ware with relief-impressed designs, and San Nicolas Moulded, a red pressed ware, are two of the most common. In addition, La Plata Moulded and Niño Stamped, the latter a check-stamped pottery, are first known. Besides the molded or pressed pottery, there is a Black ware incised type, Corral.

Polychromes are not completely unknown. A variant of "Coast Tiahunaco A," or "Epigonal," and Black-white-red Geometric, are found on the surface of Tomaval Period sites, particularly the looted cemeteries. These painted styles derive from the Tiahuanaco horizon, and are better known on the central coast. Their appearance in the north, following the Mochica styles, is generally considered to mark a Tiahuanacoid period in the valleys of Chicama, Moche, and Virú. Actually, the Epigonal and Black-white-red wares are numerically trivial in the Tomaval ceramic period. Because of their Tiahuanacan affiliations, they do, however, help correlate the Tomaval Period with other Peruvian chronologies.

In addition to the fluctuation of pottery types and the appearance of new types, the Tomaval Period is markedly different from the preceding Gallinazo and Huancaco Periods in that decorated pottery, including effigy forms and stirrup-mouthed jars, is frequently found in refuse sites. These are the same decorated types and complex vessel forms that compose the pottery found in graves of the period. For Tomaval there is not the differentiation between secular pottery, on the one hand, and ceremonial or funerary ware, on the other, that so definitely characterized Huancaco.

SITE DISTRIBUTION

The 114 sites of the Tomaval Period have much the same pattern of distribution in the Valley as did the 106 Huancaco Period sites (fig. 48). The Tomaval peoples occupied all parts of the Valley system. The Huacapongo drainage shows as many, or more, sites for the Tomaval Period as were attributed to the preceding periods. Queneto quebrada and the Middle Valley are well occupied, and there are about as many Tomaval sites in the Lower Valley as there were Huancaco sites. There are, however, some shifts in site distribution in the Lower Valley. The Gallinazo Group area, which was almost deserted in the Huancaco Period, shows a few more sites in Tomaval; these, however, give a false demographic impression as most of them are very superficial occupations or merely burials in old Gallinazo mounds. Across the Valley, the big Huancaco Period site cluster around the V–88–89 site has completely vanished in the Tomaval Period, just as the Gallinazo capital (V–59) was virtually abandoned in Huancaco times. Perhaps the most noticeable new pattern is the appearance of the several Tomaval sites close to the beach. These are on both sides of the river and lie within a kilometer from the present shore.

SUMMARY OF SITE TYPES

For the Tomaval Period the functional categories of sites break down as follows: (1) living sites, (2) community or ceremonial structures, (3) fortified strongholds or places of refuge, and (4) cemeteries.

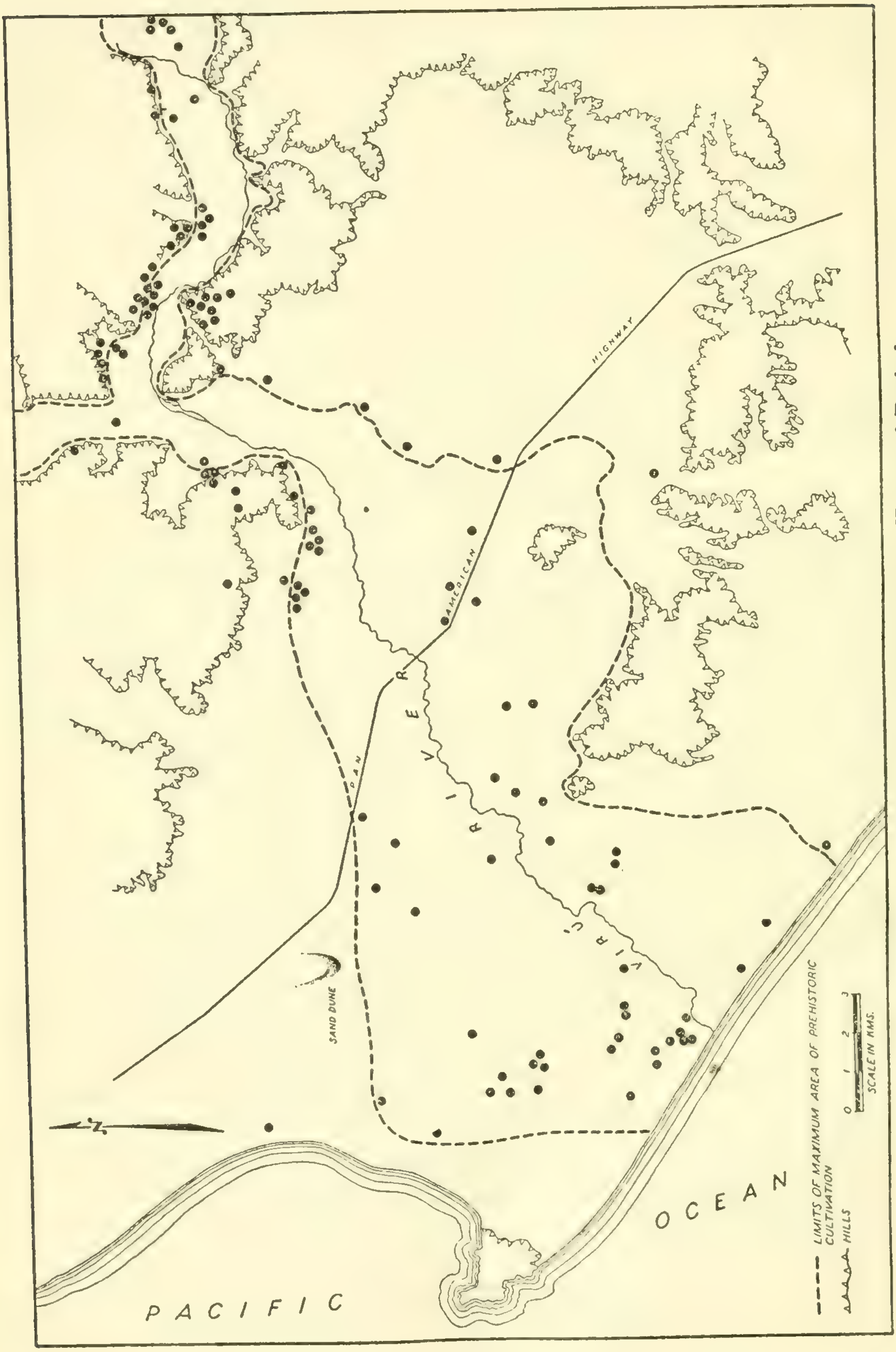

HIGHWAY
PAN AMERICAN
VIRÚ RIVER
SAND DUNE
PACIFIC OCEAN
N
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS.

FIGURE 48.—Site distribution map of the Tomaval Period.

The living sites subdivide into several classes and types. The Exposed Dwelling Site class includes the following types: Irregular Agglutinated Villages, Semi-isolated Large Houses, Rectangular Enclosure Compounds, and Great Rectangular Enclosure Compounds.

There are 26 Irregular Agglutinated Village units. Most of these are seen as stone-walled foundation patterns, although in at least one, rectangular plain adobes were also used as a building material. The units vary in size from a dozen to over 100 rooms. As the rooms are contiguous, the total area of the site is in direct proportion to the number of rooms. Individual rooms are generally rectangular and vary from large or courtyardlike compartments, to small cubicles or bins in which it would be impossible for a person to stretch out at full length. Most units or clusters include at least one large room. The Irregular Agglutinated Villages are located both on the outwash plains below the hills and on the hill slopes. The latter sites are terraced, and they are usually larger than those on flat ground. Most sites, as we have arbitrarily defined them, consist solely of the Irregular Agglutinated unit; but in a few cases a single site, with a total area 100 meters or less in diameter, will contain an Irregular Agglutinated unit, one or more Semi-isolated Large Houses, and, perhaps, a Rectangular Enclosure Compound.

The Semi-isolated Large Houses of the Tomaval Period tend to be larger than those described for either Gallinazo or Huancaco. Most of them are known only from stone-walled foundations, although there are two constructed wholly of tapia and rectangular plain adobes. In size they will vary from 10 meters square up to 21 by 17 or 24 by 20 meters. They may be single-roomed, but more often they will be divided into two or three large rooms or one large room and one or two small ones. As they are frequently seen as outliers to an Irregular Agglutinated room cluster, it is possible that the Semi-isolated Large House served as the original nucleus around which an agglutination of rooms was formed. As previously noted, it is usual for an Agglutinated Village to have one or two large rooms in its midst. The medium-sized and small rooms could have been added accretionally.

Rectangular Enclosure Compounds of the Tomaval Period are seen in both rock-walled and adobe foundations. The rock-walled are the more numerous. They range in size from 22 by 17 (the same size as the largest of the Semi-isolated Large Houses) to 90 by 30 meters. They are found on both flat and terraced terrain. Some of the smaller ones resemble the Rectangular Enclosure Compounds of the earlier periods. The interior rooms of these are of medium or small size and their arrangement is nonsymmetrical. Ten rooms or compartments is an average number. The larger compounds include one or two of the rock-walled ones and three of the adobe-walled variety. These larger compounds tend to have a symmetrical internal arrangement, with large rooms or courtyards, corridors, and a few small rooms. Two of them, V–297 (adobe) and V–195 (rock) incorporate small, rectangular flat-topped mounds. The adobe in the Rectangular Enclosure Compound sites is either massive tapia or tapia combined with plain rectangular brick adobes.

The Great Rectangular Enclosure Compound sites are all adobe-walled and constructed of tapia sections or tapia with plain rectangular adobes superimposed upon a tapia base. These sites differ from the Rectangular Enclosure Compounds in both size and content. They are much larger, as the name implies, being as much as 130 meters square, and they are virtually empty of small subdivisions or compartments. There are only three sites of this type: V–171, V–172, and V–246. Site V–174 is a possible intermediate form between the Rectangular and Great Rectangular types. It is only 25 meters square, but is, apparently, devoid of interior compartmentalization. V–174 is, however, so badly eroded that it is difficult to appraise. Unlike the others, it seems to have been constructed solely of plain rectangular adobes.

The other classes of living sites are Additional Occupation Sites or middens, Dwelling-Construction Mounds, and Earth-Refuse Mounds. There are five ceramically pure Tomaval middens. These vary in extent from 200 by 100 down to 75 by 40 meters. All seem to be of superficial depth. Mixed midden sites, which include Tomaval ceramics, range all the way from a kilometer in extent down to a small concentrated pile less than 25 meters in diameter and 2 meters deep. There are only seven Dwelling-Construction Mounds affiliated with Tomaval. All were built earlier (mostly Gallinazo) and all bear only a thin top layer of Tomaval refuse or have Tomaval intrusive burials. The six Earth-Refuse Mounds, with one exception, were earlier occupation sites. The exception, which showed pottery of no other period, is 60 meters in diameter.

There is one possible community building in this period. This is site V–190 in upper Huacapongo. This badly damaged building may have been a large rectangle with an interior encircling banquette; but the foundations have been semiobliterated, and we cannot be certain. If V–190 is such a structure, it has a counterpart in the succeeding La Plata Period (site V–44).

There are 13 pyramidal mound sites. V–37, V–148, V–298, V–299, and V–300 are all primarily earth and rock constructions and all date only from the Tomaval Period. They are rectangular, both at the base and summit, and vary in basal measurements from 100 by 75 to 45 meters square. Bases or summits, or both, may be enclosed in retaining walls of stone masonry. Summits are flat or divided into two or three platform levels. These mounds are very similar to the mounds of mixed Puerto Moorin-Tomaval dating, V–185, V–198, and V–200, which were discussed under the Puerto Moorin Period. There are two adobe mound sites which have mixed ceramic datings of Tomaval and earlier periods, and among the other Tomaval pyramidal mound sites there is one (V–134) which is a group of four mounds, all made, largely, of earth and rock. There is, also, a Tomaval earth and rock mound (V–182) which is found within a small, walled rectangular enclosure in which there are a few rock-walled rooms attached to one side of the mound. On a petty scale, this reminds one of the Pyramid-Dwelling-Construction Complexes; but it also suggests the mound or platform within the Compound Village, a trait which is known for Tomaval and later. In this same connection, it should be pointed out that several of the Tomaval Pyramid Mounds listed here have attached walls or large enclosures associated with them. They are not, necessarily, located within these enclosures, compound-fashion. The walls or enclosures are more in the nature of the extensive wall features attached to the preceding Huancaco Period Pyramid-Dwelling-Construction Mounds. As many of the Tomaval mounds so concerned have the mixed Puerto Moorin-Tomaval dating, the question arises as to the date of the walls. We are confronted with the same dating difficulties here as with the mounds, but I think it most likely that the extensive wall features are Tomaval rather than Puerto Moorin.

The Pyramid-Dwelling-Construction Complex was not built in the Tomaval Period. Sites V–152–153, which date from the Gallinazo Period, show some Tomaval as well as Huancaco ceramics, but these types are only superficial finds. Neither is the Castillo Fortification Complex a feature of Tomaval. There are instances, such as V–51, where Tomaval burials are found in cemetery areas adjoining a Castillo Fortification, and it is possible that these strategic sites were taken over by the Tomaval inhabitants of the Valley; yet, if they did so, there is no concrete evidence to show additional building or occupation of the structures proper.

The Hilltop Platform fortified site, V–212, was occupied in the Tomaval Period, and a fairly large Hilltop Agglutinated Village, V–61, was begun at this time.

Tomaval cemeteries are numerous and are located, principally, around the margins of the Upper Valley or along the coast. The Tomaval graves seem, generally, to have been simple pits in the sand, although there are some examples of Tomaval burial in the summits of pyramidal mounds where stone-lined cists were used. Tomaval re-use of earlier cemeteries, particularly those of the preceding Huancaco Period, and of deserted mounds, is a characteristic funerary practice of the period.

EXPOSED DWELLING SITES

Explanatory note.—As with the previous period descriptions, "Exposed Dwelling Sites" deals with those sites on which there are structural remains that appear to have been, primarily, dwellings. There are 52 such sites of which 28 show no other ceramic component than that of the Tomaval Period and can be reasonably dated as such. The remaining 24 sites have Tomaval plus other ceramic components in mixture. In spite of these mixtures it is my opinion that the visible structures of these sites also relate to the Tomaval Period.

The 52 sites may be itemized as follows:

Tomaval (unmixed)

V–4
V–5
V–7
V–8
V–9
V–25
V–27
V–35
V–36
V–45
V–49
V–54
V–60
V–111
V–147
V–172
V–174
V–190
V–191
V–194
V–195
V–222
V–225
V–226
V–227
V–246
V–282
V–297

Tomaval (mixed)

V–22
V–24
V–26
V–29
V–50
V–78
V–123
V–130
V–143
V–171
V–183
V–184
V–189
V–204
V–209
V–210
V–211
V–213
V–214
V–223
V–228
V–255
V–256
V–312

The unmixed sites will be discussed first, followed by those which have mixed ceramic components.

There are also a number of other sites which show Tomaval Period midden refuse, either in unmixed or mixed state. At some of these there are no structures; and at others the buildings cannot be related to the Tomaval pottery component at the site. These are treated briefly at the end of this section as "Additional Occupation Sites."

V–4, V–5.—These sites are in the desert near the west flank of Cerro San Ildefonso (Quad D–2, southwest). Both are stone-walled Semi-isolated Large Houses. Appearing isolated from other structures, they suggest the rock-walled Community Building rectangles described for the Huancaco Period; however, these rectangles are considerably smaller than the Huancaco ones and could have been large houses. There are also some evidences of interior partition walls, particularly in V–4.

V–4 is seen as a foundation of waterworn boulders set in mud now almost flush with the surface of the sand. The walls are 60 cms. wide. Over-all dimensions of the foundation are 17.2 meters north-south and 21.4 meters east-west. At the east side of the rectangle, immediately adjacent to it, is a small midden refuse.

V–5 is almost identical with V–4 in structure and appearance. It is not oriented to the cardinal points of the compass (fig. 49). The shorter dimension is 14 meters, the longer 19.3 meters. Down slope,

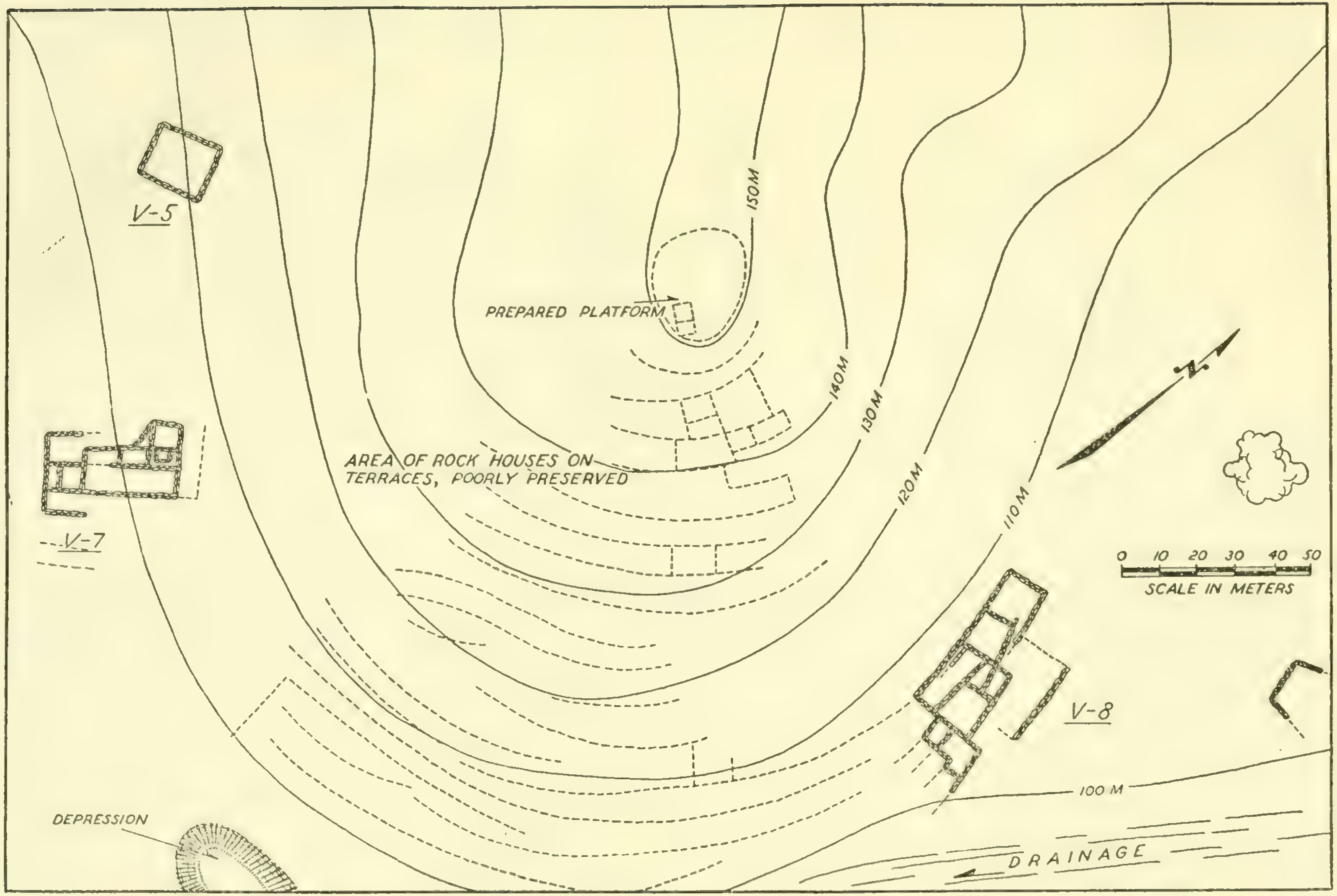

V-5
V-7
V-8
150M
140M
130M
120M
110M
100 M
PREPARED PLATFORM
AREA OF ROCK HOUSES ON TERRACES, POORLY PRESERVED
N
0 10 20 30 40 50
SCALE IN METERS
DEPRESSION
DRAINAGE

FIGURE 49.—Ground plans of sites V-5, V-7, and V-8. All date as Tomaval Period.

or to the west and south, there is a small area of refuse and vague evidences of other rock-wall foundations. The only unusual feature is an interior stone flooring of the rectangle which is visible in its southwestern half.

Modest-sized collections date V–4 and V–5 as Tomaval with ratings of average and excellent.

V–7.—This is probably a Rectangular Enclosure Compound house group on the lower hill slopes of Cerro San Ildefonso (Quad D–2, southeast). Foundation evidences can be traced for about 40 meters up and down slope and vague, scattered signs of walls can be seen for 70 meters across the slope (pl. 35, *top*). The walls are of boulders set in mud. The outer walls, especially on the down-slope side, contain a number of unusually large boulders, and stones of this size are not found in the inner partitioning walls. Nine or ten rooms or compartments are still visible (fig. 49). These are constructed on varying levels to accommodate rooms to the slope.

A sherd collection from this site is placed as Tomaval with an excellent rating. Ford makes the special qualification that the V–7 collection dates from the earlier part of the period.

V–8 (Cerro San Ildefonso).—Cerro San Ildefonso (Quad D–2, southeast) is situated on the steep southeast face of a semi-isolated hill. This hill is the extremity of a spur which extends out from the larger hills of the Valley's northern border.

The constructions of V–8 are of unworked boulders set in mud mortar with spalling of small rocks. Walls vary in width from 60 to 80 cms. A small section of a wall in one room is made of rectangular, mold-made adobes. It is possible that adobes were used for the upper portions of many of the walls although sufficient stone rubble is found on the site to account for fallen or destroyed walls of stone.

At the base of the hill an Irregular Agglutinated Village unit extends in an arc approximately 250 meters long. The best-preserved section of the site is at the east corner (fig. 49). From the base of the hill old house terraces may be followed to the summit. As one ascends, the area of the dwellings gradually contracts until near the summit there is a terrace space for only a few rooms. The summit itself is a flattened area about 25 meters in diameter on which there is a foundation for a small two-roomed building. Difference in elevation from terrace to terrace varies, but 2 meters is an average estimate. The width of the terraces may be anywhere from 2 to 10 meters. In spots there have been more ambitious attempts at leveling or filling so that isolated building platforms will be slightly higher or extend outward farther than the terrace level with which they are associated.

Wall alinements are difficult to follow on the slope, and from the middle distance the whole gives the appearance of a jumble of boulders. The best preserved rooms vary in size from about 10 meters square down to 4 by 5 meters. They are not at all perfectly alined. Emphasis seems to have been upon making them conform to the contours of the hill rather than to each other. Rooms were, however, very definitely tied together, both laterally and from terrace to terrace. An estimate of 100 to 125 rooms for V–8 is conservative.

A potsherd collection from all sections of the site is dated as Tomaval Period.

V–9.—This small Irregular Agglutinated group lies about 200 meters northeast of V–8 (Quad D–2, southeast). Like V–7, it was, perhaps, a little outlier of the larger V–8 group. It is on the drift slope at the foot of the bordering hills. At the west side of the little ruin is a small, looted cemetery (fig. 50). Sherds, pulverized shell, and other debris are scattered over and around the building foundations.

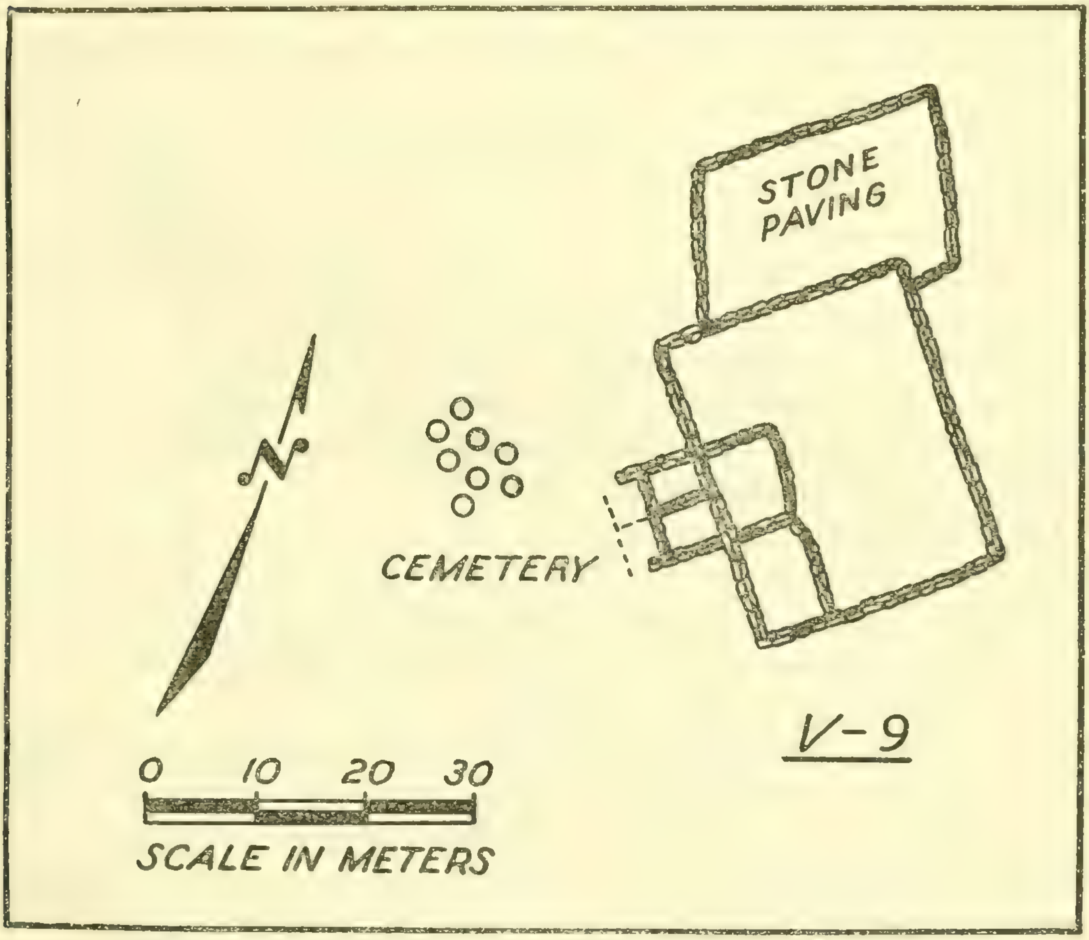


FIGURE 50.—Ground plan of site V–9. Tomaval Period.

The double-faced wall foundations of unworked stone are about 70 cm. wide in the main building outer walls. Walls of smaller rooms and of another attached large room are narrower. The main room measures approximately 23 by 28 meters. Two rooms, 6 meters wide and 7 and 8 meters long, are in one corner of the larger room, and other smaller rooms adjoin it on the outer west side. On the north side is a room about 23 by 14 meters. This room is completely paved with stone.

A collection of over 150 sherds was made in and around the house but avoiding the little cemetery. Ford dates the collection, with an excellent rating, as Tomaval. Sr. Jacobs reported that he had excavated four graves from the adjoining cemetery which fell into this same period.

V–25.—This site is in Huacapongo-North (Quad E–1, southeast) on the rocky outwash plain. The site is composed of two units (fig. 51) each an Irregular Agglutinated arrangement of multiple rooms. The larger or western unit has over-all measurements of 50 by 25 meters. Rooms are quadrangular, and room and wall alinements are somewhat uneven. Fifteen or sixteen rooms can be counted. The largest are around 10 by 10 or 10 by 8 meters while the smallest are less than 3 meters square. Both exterior and interior doorways were observed. A raised earth and stone banquette is in one room.

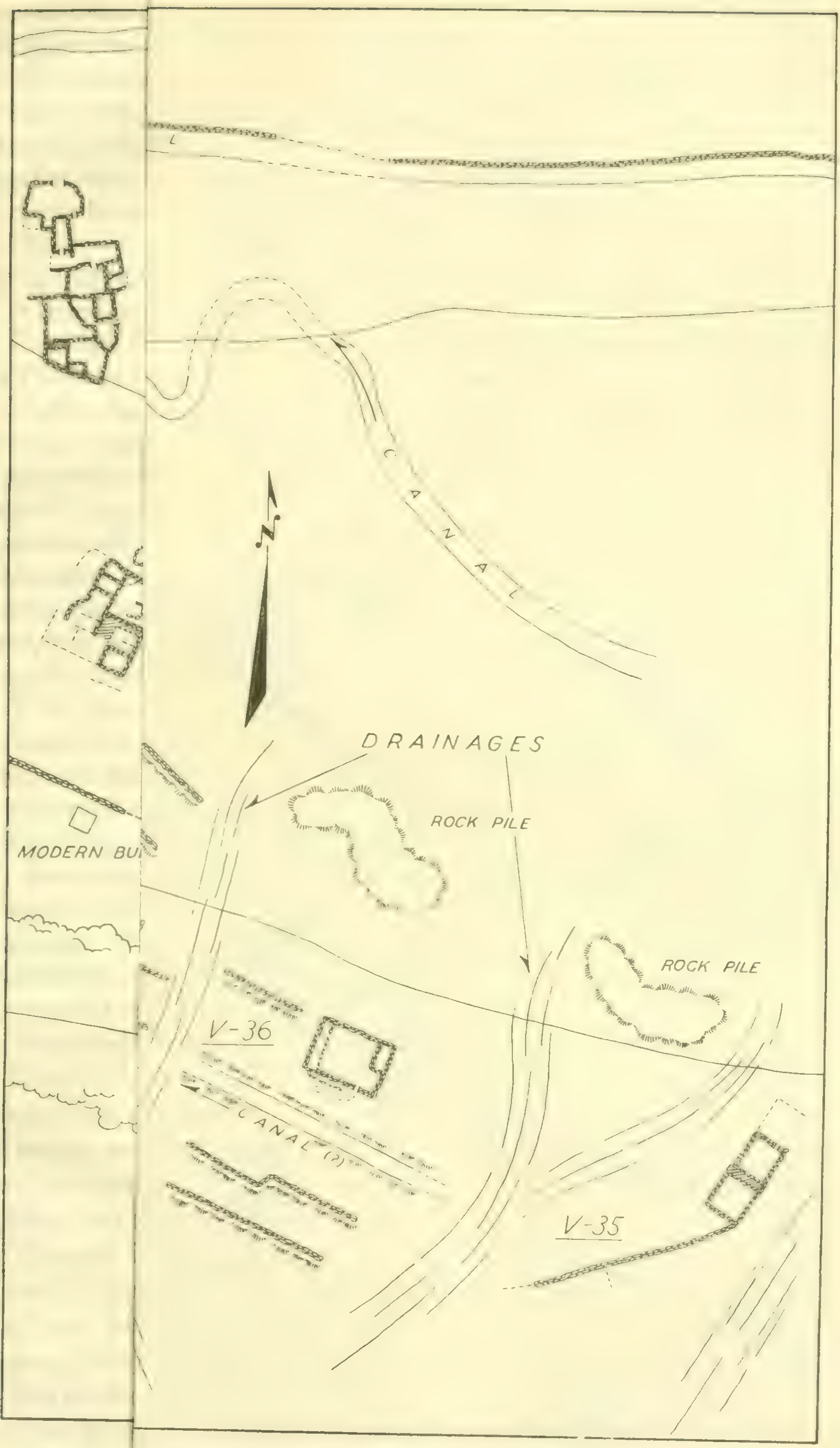
The smaller or eastern unit has six or seven rooms, although this building has been damaged by flooding and some walls and rooms seem to have been carried away. There is one large room (12 by 13 meters) to which are attached several smaller ones. Also, within the large room, at the corner nearest the doorway leading to the outside, there is a small cubiclelike room, about 2 by 3 meters. This unit appears to be, as was the other, an aggregate of rooms joined together without particular concern for alinement.

Construction throughout the site was double-faced stone masonry with mud and uncut stones. The foundations stand about 50 cms. in height. The superstructure could have been stone or adobe.

A large collection of over 200 sherds was given the dating of Tomaval Period with an excellent rating.

V–27.—This site, on the outwash plain of Huacapongo-North (Quad E–1, southeast), consists of the foundations of three stone-walled building units, two of which have been partially destroyed. The intact unit is a Rectangular Enclosure Compound which measures 26 by 15 meters (fig. 51). The outer wall is 1 meter wide; the interior walls, which divide the rectangle into rooms, are thinner. There is a large room (15 by 7 meters) at one end of the rectangle and attached to it are five moderate-sized and seven small, binlike rooms. Some doorways leading from room to room are still visible, but I could find no door or entrance opening onto the outside.

The larger of the other two units lies about 10 meters northwest of the unit described. It is an Irregular Agglutinated arrangement of five or more conjoined rooms of varying size. The largest of the


L
CANAL
N
DRAINAGES
ROCK PILE
MODERN BU
ROCK PILE
V-36
CANAL (?)
V-35

and V–36 as Tomaval Period.

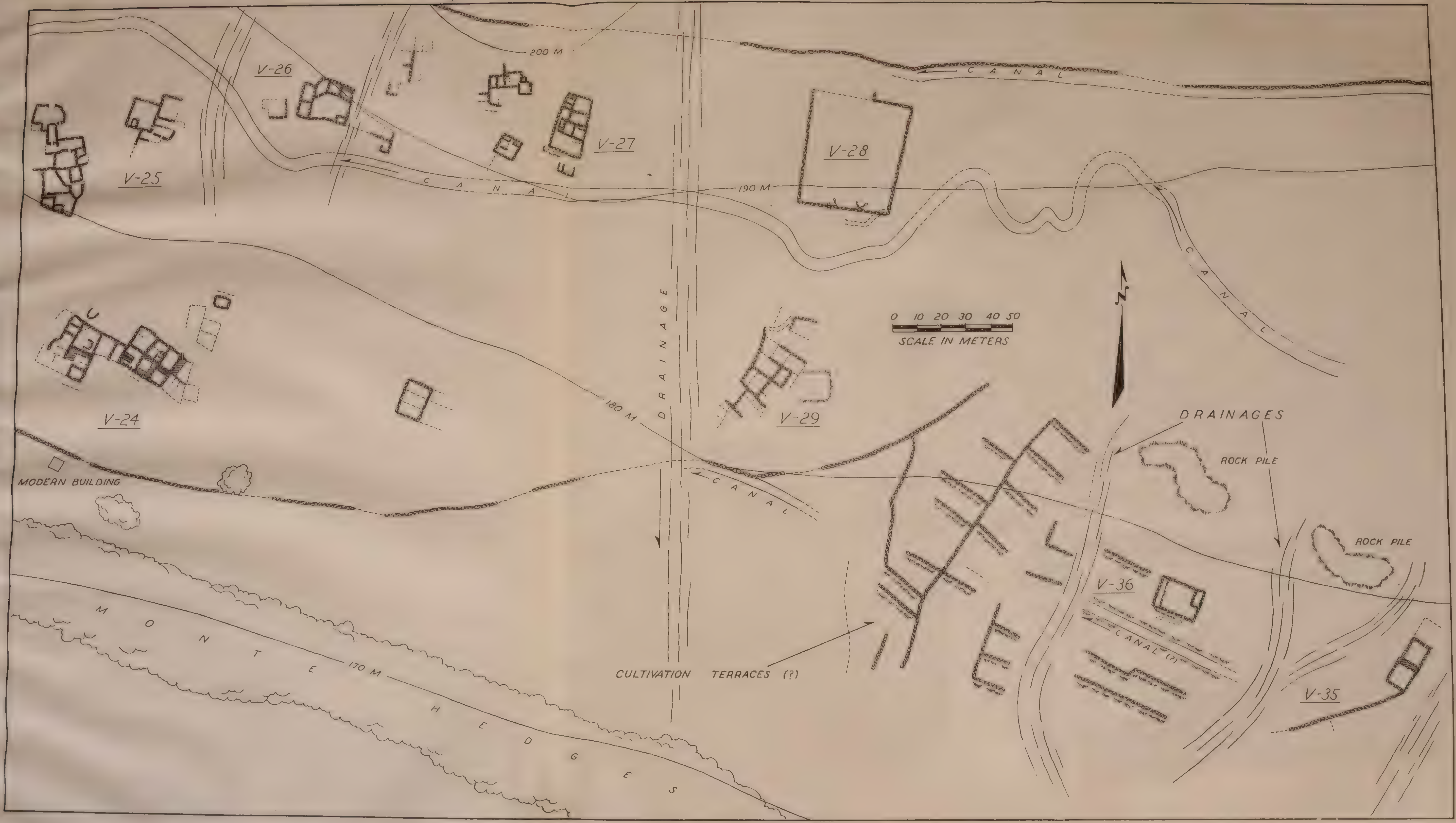

V-25
V-26
V-27
V-28
V-24
V-29
V-36
V-35
200 M
190 M
180 M
170 M
CANAL
CANAL
CANAL
CANAL
CANAL (?)
DRAINAGE
DRAINAGES
ROCK PILE
ROCK PILE
0 10 20 30 40 50
SCALE IN METERS
N
MODERN BUILDING
CULTIVATION TERRACES (?)
MONTE HEDGES

FIGURE 51.—Ground plan of site group in Gudarra quebrada. Site V–28 dates as Huancaco; V–24, V–25, V–26, V–27, V–29, V–35, and V–36 as Tomaval Period.

rooms average about 5 meters square. Other rooms were once attached to the cluster but have been washed away.

The smaller of the two partially destroyed buildings, situated 10 meters or so south of the one just described, is a Semi-isolated Large House, 8.5 by 8.5 meters. Interior partitions have cut this up into smaller rooms, some of which look like storage bins or cubicles similar to those found in the first intact unit.

Perhaps a fourth unit is represented by remnants of a foundation lying just to the south of the intact unit.

A canal, running westward, passes just a few meters below the site.

Over 200 sherds from this site were dated, with an excellent rating, as Tomaval Period.

V–35.—In Huacapongo-North, on the outwash plain a kilometer's distance east-southeast of Corral hill and the Corral (V–19) site, there are a series of low, broad terraces and rock embankments which extend for almost another kilometer to the east (see fig. 51 for the westernmost of these terraces and embankments). These terracings, embankments, and rock-walled pens appear to be irrigation or cultivation plots rather than buildings (see p. 366). There are, however, two Semi-isolated Large Houses within this area of the terraces, sites V–35 and V–36 (fig. 51).

V–35 (Quad E–1, southeast) is composed of three rock-walled room foundations, one of which is only vaguely or doubtfully seen. The southeast wall of the building is connected with a free-running wall which probably once connected onto one of the terrace walls of the cultivation plots. These walls have been cut through in several places by flood ravines so that such a connection, if it once existed, is no longer visible. The two intact rooms of V–35 are 8 by 11 and 8 by 9 meters. The third room was of about the same size. An earth and rock-faced banquette separates the two intact rooms. Doorways can be seen in the second room.

The sherd collection dating as Tomaval Period is rated as excellent.

V–36.—(See Quad E–1, southeast.) This rock-walled building foundation occupies a terrace just above an old canal. It is about 90 meters west-northwest of V–35 (fig. 51). Although a terrace wall lies in alinement with the north wall of the V–36 building, I doubt if there was a connection here.

The unit is 18 by 13 meters. A room, 7 by 3.5 meters, is in one corner. Along the west side of the building, in the interior, there may have been a banquette. A door opens on the south side, and a narrow path, bordered with arranged stones, curves away to the west. A line of stones, not a wall, also parallels the south side of the building and joins with it near the southwest corner.

No pottery collection was made at this site, and the dating is based solely upon architectural pattern and immediate associations. With these in mind, I place the site as Tomaval.

V–45.—This unit is a rock-walled group of rooms, a sizable section of which has been destroyed by flooding. It is located at the mouth of the Queneto quebrada (Quad E–2, northwest). The site is now about 50 by 40 meters in extent. It may once have been enclosed in a rectangular compound wall (fig. 22), but in its present condition would have to be classed as an Irregular Agglutinated unit. There are at least two large rooms, one 12 by 7 and the other 11 by 8 meters. There are also outlines of some smaller rooms, some of which may have been storage bins.

An ancient canal runs along the south side of the building and is bordered on its up slope or north side by a stone wall which continues westward from the site. This wall is eventually joined by another which comes up from the south at right angles. A puzzling feature is that this second wall seems to cut across the floor of the canal to join the first wall. Was the wall built after abandonment of the canal? A third wall, running east-west, may once have joined with the north outer wall of V–45, linking the site with V–47.

A sherd collection of about 100 pieces dates as Tomaval Period with an excellent rating.

V–49.—This is a badly battered Irregular Agglutinated site in Queneto quebrada (Quad E–2, northwest). The foundations are all of double-faced masonry with undressed stones. Walls average about 60 cms. in thickness. It lies just northwest of the gridlike cultivation plots (pl. 54, *top*) and is about 300 meters northwest of V–45. A roadway (archeological) passes by a few meters south of the site, and another road of similar sort passes some 50 meters or so to the north. The canal which probably fed the network of cultivation plots also runs just below V–49. (See fig. 22.)

The site is a group of rooms conjoined without special plan. There are no unusually large rooms. At least nine compartments can be defined. Originally there were more, but a main drainage ravine has cut across one side of the site.

A collection of 61 sherds dates as Tomaval Period with an average rating.

V–54.—This is a badly battered series of rock-wall foundations located near the southwest corner of the Queneto quebrada floor (Quad E–2, northwest). It lies above an ancient major canal, and is only 30 or 40 meters distant from the site V–53 (Huancaco Period) (fig. 39). The best preserved portion is the outline of a room (probably

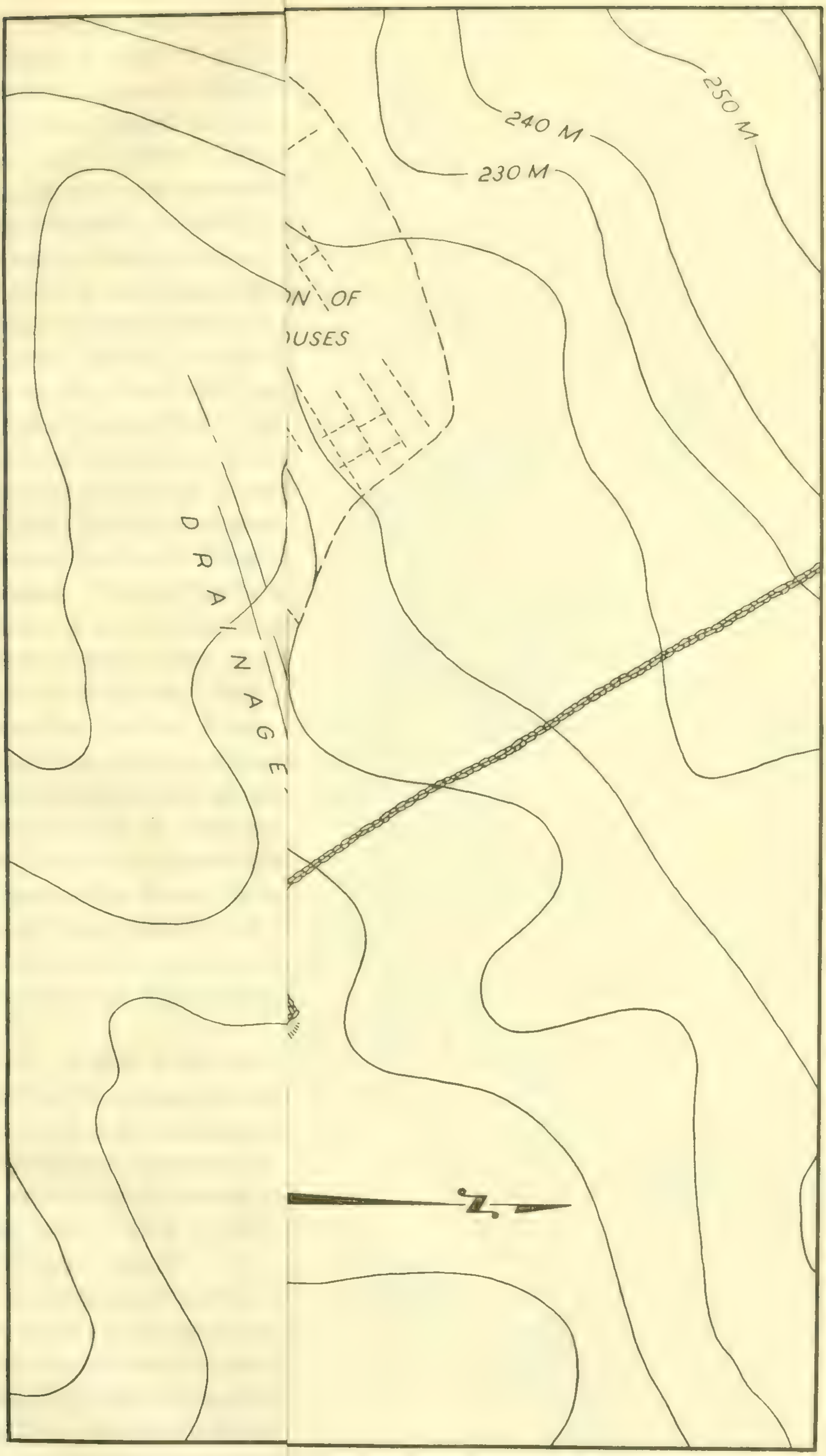

250 M
240 M
230 M
ON OF
OUSES
DRAINAGE
N

FIGURE 52.—Groun ates as Tomaval; V–52 as La Plata Period.

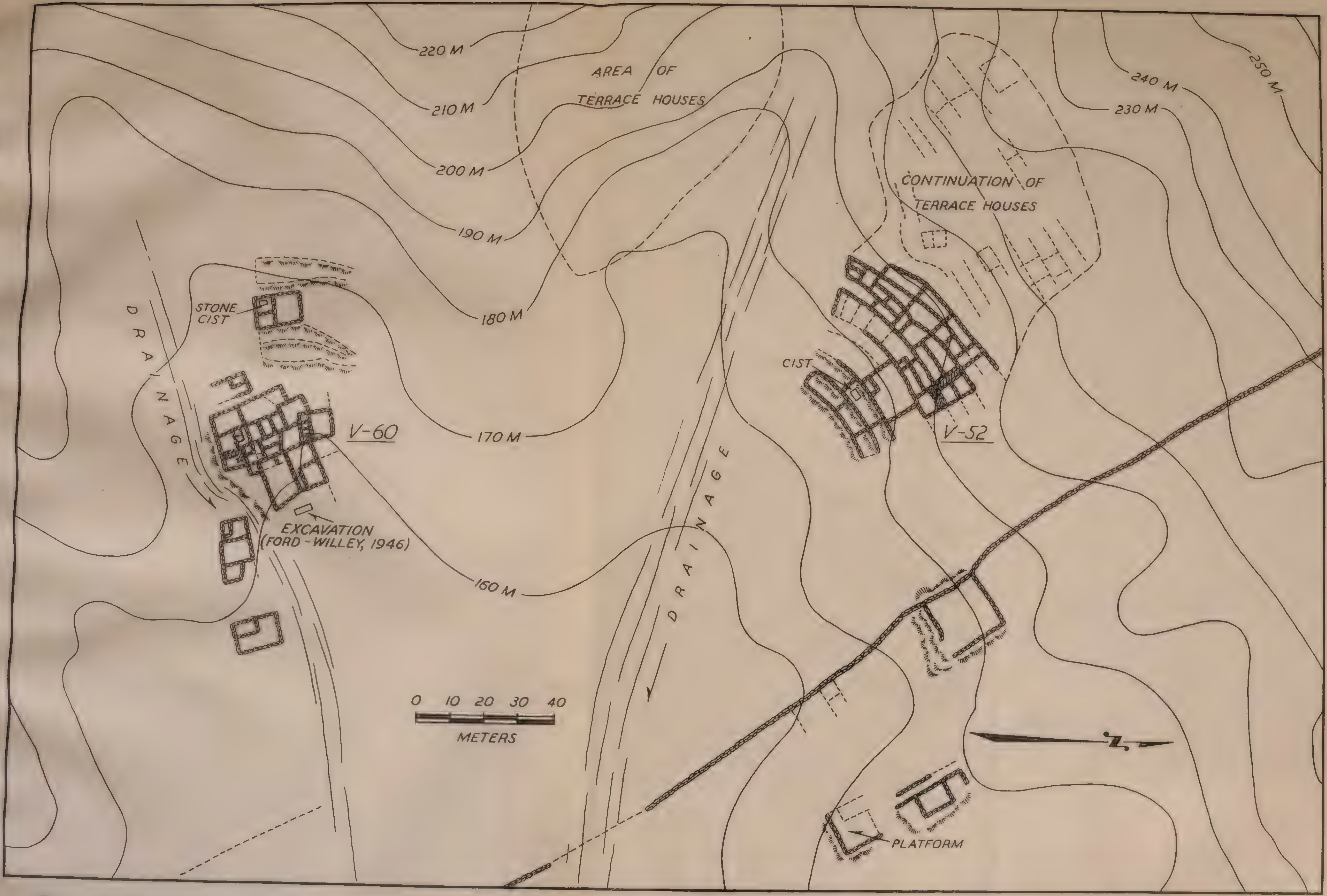

220 M
210 M
200 M
190 M
180 M
170 M
160 M
230 M
240 M
250 M
AREA OF TERRACE HOUSES
CONTINUATION OF TERRACE HOUSES
DRAINAGE
STONE CIST
V-60
EXCAVATION (FORD-WILLEY, 1946)
DRAINAGE
CIST
V-52
PLATFORM
0 10 20 30 40
METERS

FIGURE 52.—Ground plan of V–52 and V–60. V–60 is on the valley floor, but V–52 is constructed on steps of terraced hill slope. V–60 dates as Tomaval; V–52 as La Plata Period.

955616 O - 53 (Face p. 246)

8 by 10 meters) which had a raised banquette on two sides. This room had been a part of an irregular agglutination of conjoined rooms. A little to the south of this there are traces of a half-dozen or so rooms which were joined to each other in rather haphazard fashion. These rooms vary in size. The larger rooms were irregular in shape while the smaller rooms were more or less rectangular. A stone wall follows along the north or up-slope side of the canal here in the area of V–54.

Seventy sherds date as Tomaval Period with an average rating.

V–60.—A very small quebrada opens onto the Valley just southwest of Queneto quebrada and about 2 kilometers north of the Castillo de Tomaval (V–51); at the head of this little quebrada, on ground that is reasonably level but is at the foot of the steeper slopes of the bordering hills, is site V–60 (Quad D–2, northwest) (fig. 52; pl. 36, *top*). V–60 is composed of a main cluster of rooms and at least three outlying Semi-isolated Large Houses. The total site extends over an area some 100 by 50 meters. The main group is approximately 35 by 35 meters and is an Irregular Agglutinated unit. It contains at least 27 rooms. Six of these are large, ranging from 8 by 11 to 6 by 8 meters. The smallest rooms, in rows of threes or fours, are 1.5 to 2 meters square. One medium-sized room (5 by 6 meters) has a banquette around two sides. Exterior doorways were spotted on two rooms, but interior doors, between rooms, were not seen. There is a general terracing in the arrangement of rooms with the ones up the quebrada being set at progressively higher levels. Although it is likely that all of the unit was built at about the same time, there is no evidence of a formal plan or symmetry to the layout.

Two of the Large Houses are down slope from the main group. One of these consists of four rooms, three main compartments with a small corner room in one of the larger divisions. The other is a rectangle with a fair-sized corner room occupying one quadrant of the whole.

Back of the main unit there is a series of hillside terraces reinforced with stone retaining walls. These appear to be house platforms, although a Large House foundation, comparable to those in the groups below, was seen in only one place. This house is rectangular (14 meters by 9 meters) and divided into two small rooms and one large room. One of the smaller rooms has a rectangular, subfloor, stone-lined cist.

All of the masonry in V–60 is double-faced. The walls are, however, rather thin, averaging 45 cms. The stone used is unworked but shows flat planes of fracture, and these flat planes have been turned outward to effect a smooth though uncoursed facing.

Refuse was scattered around the buildings, and there was a concentration just to the southeast of the main group. Ford excavated a pit here, 5.5 by 2.5 meters in extent and carried down to sterile soil at a depth of 75 cms. Sherds were extremely numerous throughout, but four arbitrary levels showed no significant changes of types. Over 1,700 potsherds from this pit are dated by Ford as Tomaval Period, with an excellent rating.

V–111 (*Rinconada sites*).—In lower Virú-South (Quad E–5, northwest) there is an isolated group of small rock-foundation sites on the sandy plain near the hills. V–111, which is one of this group, is a rectangular Semi-isolated Large House (pl. 35, *center*). The building is 14.5 by 13 meters with the long axis oriented northeast-southwest. In the southwest interior corner is a small room, about 2 meters in diameter, which has been formed by a curved wall enclosing the angle of the corner. Along the northeast front of the house there is a terrace which extends for the width of the building (13 meters) and is 6.5 meters wide. There are some small-room constructions on this terrace which were built in attachment to the larger rectangle.

A collection of over 200 sherds was classified from this site as Tomaval; their rating is average.

V–147.—This site, in Huacapongo-North (Quad F–2, northwest), is an Irregular Agglutinated cluster of rooms which are located along what appears to be the interior side of a great wall (fig. 53). As such, it is likely to have been a part of a larger site plan, being incorporated with the Pyramid Mound, V–37, and the dwelling cluster, V–140. V–147 and V–37 have ceramic datings of Tomaval Period while V–140 dates later as La Plata. It is likely that the site complex was laid out and largely constructed in the earlier period and that it continued to be occupied during the later.

The immediate setting is the outwash plain at the foot of the hills backing up the Huacapongo quebrada. Present-day cultivation begins just south and west of the modern road. (Site V–141, to the west of V–37, lies just within the cultivated area. See fig. 53.) From the mound, V–37, to the wall and uppermost canal which follows around the base of the hills, is a distance of about 350 meters. From V–147 westward to the farthermost wall which seems to border the site group on the west is approximately 250 meters. These are the outer limits of the complex of which V–147 is a small part.

V–37 and V–140 will be described separately (pp. 281–282 and 305–306), but the wall systems, which are involved with them and with V–147, can best be reviewed here. The wall against which V–147 is constructed is the largest prehistoric wall or wall section which I surveyed in Virú Valley. It is 2 meters wide at the base and still stands as much as 2 meters high in some places (pl. 48, *center*, *bottom*). Its construction was irregularly coursed masonry of fairly large stones, being so faced on both sides, with a rubble interior core. This east wall can be traced southward, but it disappears some 100 meters below the gateway which opens at V–147.

Along the southern perimeter of the site complex there is no wall. Perhaps one once existed, tying into the walls that can be seen between V–37 and V–140 and, thus, forming an enclosure.

To the north, the east wall curves gradually westward to follow the upper canal around the foothills and out of the immediate picture. In effect, it merges with one of the major walls of Huacapongo-North.

There are a number of other walls in the vicinity of V–140 and V–147. One of these, now traceable as a low foundation, strikes almost due west from a point on the east wall about 25 meters above the V–147 houses. It continues for 275 meters and then turns north for some 80 meters until it can no longer be traced. It may also have joined with the major wall following the upper canal. Then, there are several walls running at right angles to the wall just described. Most of these are of the same massive size (base about 2 meters wide); although one, marked as "superimposed wall" on the map, is smaller. Its superimposed position over the foundation of the larger wall indicates that it was built at a later time.

In sum, the wall systems around V–140, V–37, and V–147 indicate that these sites were integrated into a larger pattern. It seems evident that dwellings and mounds were enclosed within walled defenses. These walled defenses were, in turn, a part of a larger plan for the Huacapongo-North section of the Valley.

There is a canal which runs through the sites in question and which was probably a distributary out of the upper canal. It cannot be traced eastward, probably because of the drainage coming down the slope just outside the great east wall. The canal is picked up first along the base of the hill upon which V–140 is situated and is followed around that site westward and northward. Most likely, it rejoined the upper canal at a point farther down the quebrada, although we cannot be absolutely sure of this.

Finally, there is the site of V–147 itself, which we have used as the focal point of these descriptions. As stated, it is built up against the inside of the great east wall. The other walls of the room foundations of V–147 are of ordinary width (80 cms.) and constructed in double-faced masonry fashion. These dwellings are conjoined and extend along the wall for 50 meters. For the most part, it is a single file of rooms. Rooms are smallish (5 meters square is the largest). Some are rectangular; others rounded or irregular in form. Two rooms have interior banquettes. In one of these rooms the entire floor has been built up above the levels of the adjoining rooms, and then additional platforms were superimposed upon this. At the south end of the site is a gateway in the defense wall. The V–147 houses may have been small quarters or garrisons for defenders guarding this gateway.

Over 200 sherds from these houses date as Tomaval Period, with a rating of excellent.

V-172.—In Lower Virú-South there is an extremely dense area of *monte* lying along the river and, in some places, for as much as 1 to 2 kilometers back from the river. V-172 (Quad C-4, southwest) is in this thicket about 1 kilometer from the river.

We first noted sections of tapia adobe walls in a small clearing. These walls were built up in units of a little over 2 meters in length and had been poured in narrow layers. A corner of a structure was located with walls disappearing off in the *monte* in two directions. Following along from the corner we were able to trace one wall for about 75 meters, but extremely tough and dense algarroba made further exploration impossible without cutting and burning of the growth.

Although further investigation is necessary to determine the layout of this site, it is a reasonably good guess that we have here a Great Rectangular Enclosure Compound more or less devoid of interior rooms or partitions. Site V-171 (see pp. 265-267) is such a construction.

The surface collection of pottery dates as Tomoval, and has an average rating.

V-174.—This site is another adobe construction found within the deep *monte* which borders the river in Lower Virú-South (Quad C-4, northeast). It is about midway between sites V-171 and V-172.

Ford and I first saw this group of adobe buildings while following a tree-grown road through this part of the Valley. A walled Rectangular Enclosure Compound about 25 meters square could be faintly made out although the foundations were weathered down almost to ground level. A small low platform of adobe was also visible. It is possible that more buildings lie back from the road in the undergrowth. Some small, brick-type adobes were used in the construction although tapia adobe may also have been employed. A single, plain, rectangular adobe, measuring 33 by 11 by 11 cms., was removed from a foundation.

Almost 200 sherds were gathered from around the walls. These date as Tomaval Period with an average rating.

V-190.—In Huacapongo-North there are a group of sites on the Valley bottom floor which, today, lie above the present line of cultivation. It is very likely that this land was cultivated in prehistoric times. V-190 (Quad G-2, northwest) is the remnant of one of these sites. It lies (see map, fig. 54) near the foot of the hills in the angle formed by what appears to be a major defense wall and the course of the upper canal. A few meters to the northeast of V-190 is an extensive area (perhaps 100 meters square) of very badly preserved

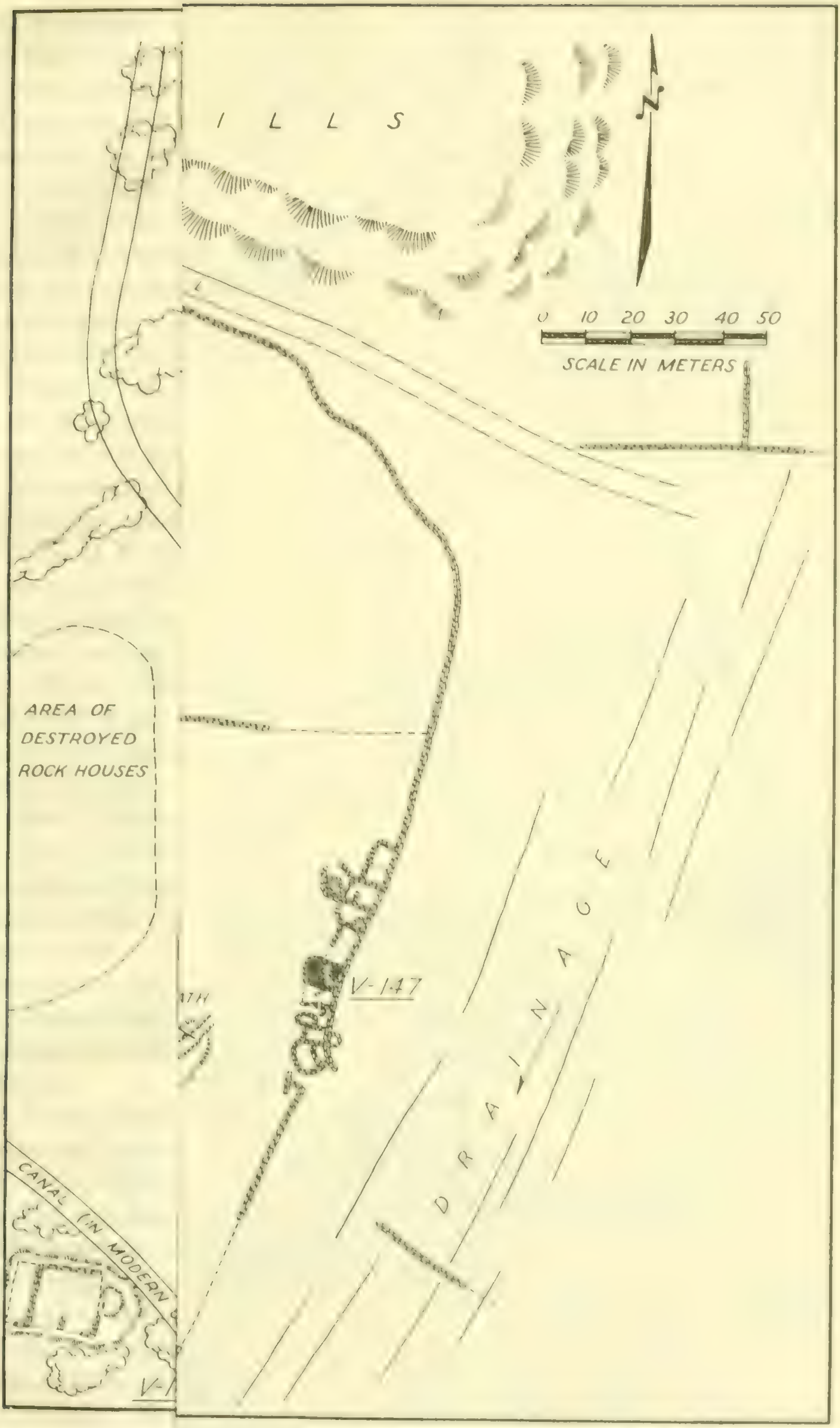

I L L S
N
0 10 20 30 40 50
SCALE IN METERS
AREA OF DESTROYED ROCK HOUSES
V-147
DRAINAGE
ATH
CANAL (IN MODERN
V-1

FIGURE 53.—G as built in either Early Puerto Moorin or Huancaco times.

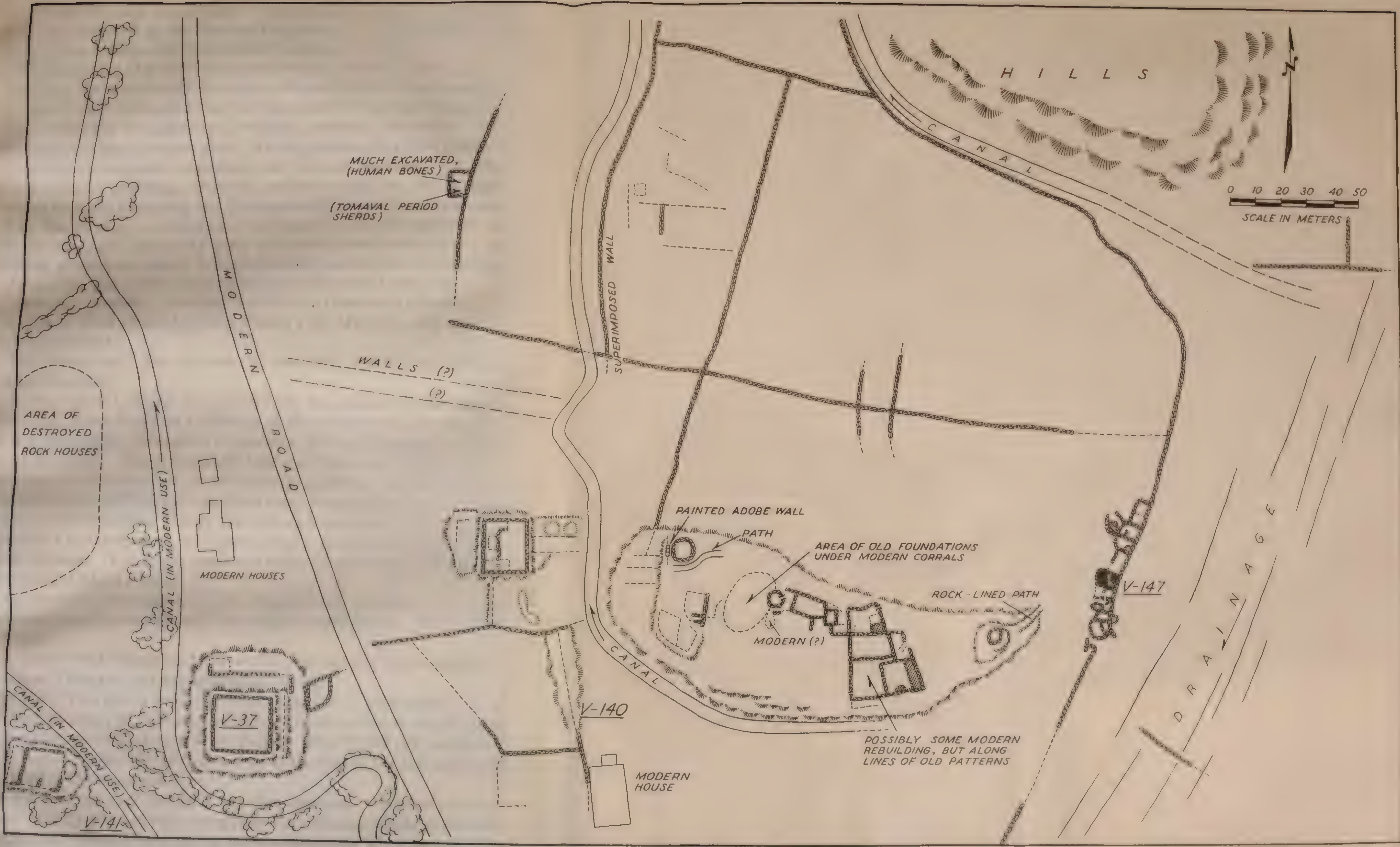

HILLS
N
CANAL
0 10 20 30 40 50
SCALE IN METERS
MUCH EXCAVATED, (HUMAN BONES)
(TOMAVAL PERIOD SHERDS)
MODERN ROAD
SUPERIMPOSED WALL
WALLS (?)
(?)
AREA OF DESTROYED ROCK HOUSES
CANAL (IN MODERN USE)
MODERN HOUSES
PAINTED ADOBE WALL
PATH
AREA OF OLD FOUNDATIONS UNDER MODERN CORRALS
ROCK-LINED PATH
MODERN (?)
V-147
DRAINAGE
CANAL
V-140
POSSIBLY SOME MODERN REBUILDING, BUT ALONG LINES OF OLD PATTERNS
MODERN HOUSE
V-37
CANAL (IN MODERN USE)
V-141

FIGURE 53.—Ground plans of dwelling sites, mounds, and walls in Gudarra quebrada. V–37 and V–147 date as Tomaval; V–140 is La Plata; and V–141 was built in either Early Puerto Moorin or Huancaco times.

rock structures and foundations. Apparently a large dwelling site had been destroyed by the floods at this place. V–190 may have been no more than a large building of this site group.

The north side of V–190 was carried away by the same drainage that destroyed the more extensive site to the northeast. The remaining portion of the building is either the foundation of a once massive wall or a continuous banquettelike structure, probably the latter. This banquette is about 3 meters wide. At one point on the raised platform there is a rectangular, stone-lined cist; at another, there is a small superimposed platform. Several partition walls jut out at right angles from the banquette, and these probably formed rooms although their size or shape can no longer be detected. At the northeast end of the banquette continuity there is a rectangular room, 10 by 5.5 meters, which has a clearly defined doorway, a small cist in the corner of the room, and a little platformlike room attached to one side.

This may, possibly, have been a public or Community Building of the type of V–44 of the La Plata Period (pp. 317–318), although the evidence is scant.

Ford gives the V–190 collection of over 100 potsherds an excellent Tomaval rating.

V–191.—V–191 (Quad G–2, northwest) lies just across the big defense wall from V–190 at a distance of about 40 meters (see fig. 54). It is a Rectangular Enclosure Compound, 22.5 by 17 meters, and contains 10 rooms. There are small bins and platforms in the corners of some of the rooms but no extensive banquettes. Attached to the outside of the building are two little room foundations, one of which has a raised platform. There are at least three doors leading to the outside of the compound, and some interior doors give passage from room to room. The larger rooms are about 7 by 5 meters; the smaller ones around 3 by 4 meters.

Construction throughout is by double-faced masonry, and wall foundations still stand about 50 cms. high in some places. Wall width is 80 cms.

A large sherd collection from within and around this building is placed as Tomaval, and has an average rating.

V–194.—This site is in Upper Virú (Quad E–1, northwest). It is situated on a steep hill slope overlooking a small quebrada which opens to the west out of the Upper Virú Valley. Site V–192 (of the Huancaco Period, see pp. 191–193) is nearby at the foot of the hill slope and the head of the quebrada.

I did not explore V–194 with any thoroughness. Its extent is very great (500 by 200 meters), occupying virtually the whole slope of a sizable hill. House sites are on terrace platforms which are not arranged solidly over the site area but are, nevertheless, partially agglutinated and fairly dense. Stone terrace facings, stone wall foundations, and rooms with banquettes characterize the terraces.

A pottery collection of 137 sherds was made from a portion of the eastern end of the site. This collection dates as Tomaval, with an average rating. I would not say, from this, that the site area is all of this period. It is possible that earlier houses were once on these slopes. For example, V–193, on the other side of the quebrada, is a smaller site composed of terrace occupations and dates from the Puerto Moorin Period.

V–195.—This group lies in the floor of the Valley, on rocky outwash, at the juncture of Upper Virú and Huacapongo (Quad E–1, southwest). It consists of one Rectangular Enclosure Compound (50 by 25 meters)[46] and one or two Semi-isolated Large Houses (fig. 55). It is possible that more structures were once a part of the group and that these have been carried away by flooding.

Wall foundations are made of alternating layers of large and small boulders set in mud. The compound has either a high platform or a small earth and rock mound at its southern end. This platform or mound is 4 by 8 meters, 2 meters high, and walled on all four sides. To the east and west of it are rooms of about the same size as the mound. All three, the mound and the two adjoining rooms, are set on a slight rise above the rest of the building. The remainder of the ground plan consists of two long rooms, 17 by 10 and 21 by 6 meters, a long gallery, 25 by 2.5 meters, extending down the east side, and a big room or courtyard, 26 by 23 meters. Along one side of the court there is a low, wide banquette of earth faced with a row of stones. At the north end of the building there is evidence of at least one small room jutting out into the courtyard. Possibly, there were more interior divisions.

The smaller buildings at the site are two- or three-room units with fairly large, rectangular rooms. One of them has an interior banquette.

Ford's collection of over 100 sherds from this site is dated as Tomaval and rated as excellent.

V–222.—In Upper Huacapongo-North (Quad F–2, northeast), on the cultivated bottom of the Valley floor is an isolated rock-walled building. This structure is a Rectangular Enclosure Compound (see fig. 56, *upper left*) divided into five good-sized rooms. The general floor level for the whole building is a few centimeters higher than the surrounding ground level. Walls are made of medium-sized, water-worn boulders, and they are 70 to 80 cms. wide. In some places they

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[46] This is most approximate. No epidiascopic projection or chain measurements were made on this site.

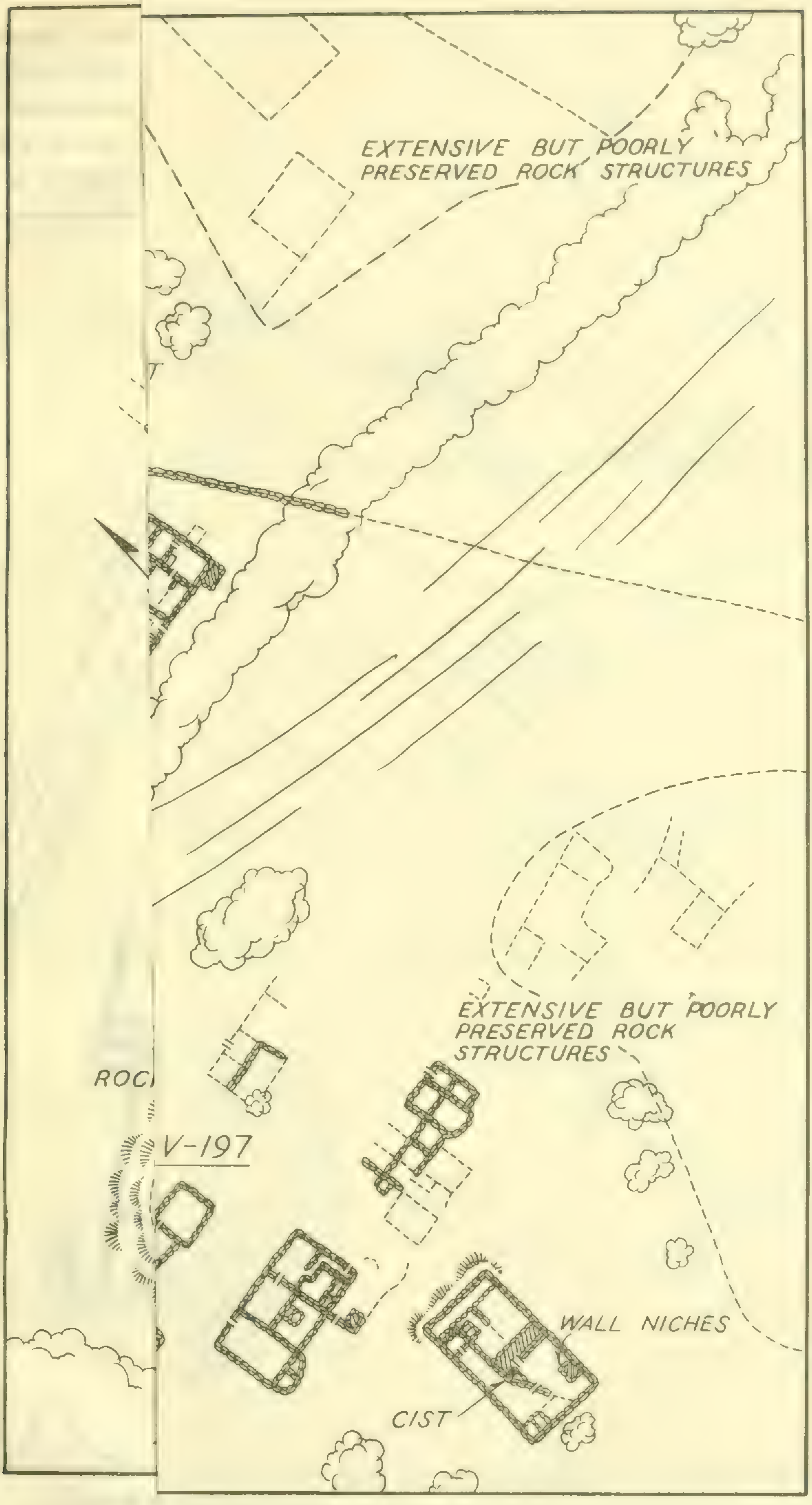
EXTENSIVE BUT POORLY PRESERVED ROCK STRUCTURES
EXTENSIVE BUT POORLY PRESERVED ROCK STRUCTURES
ROC
V-197
WALL NICHES
CIST

FIGURE 54.–
re-used during the Huancaco Period; V–189, V–190, and

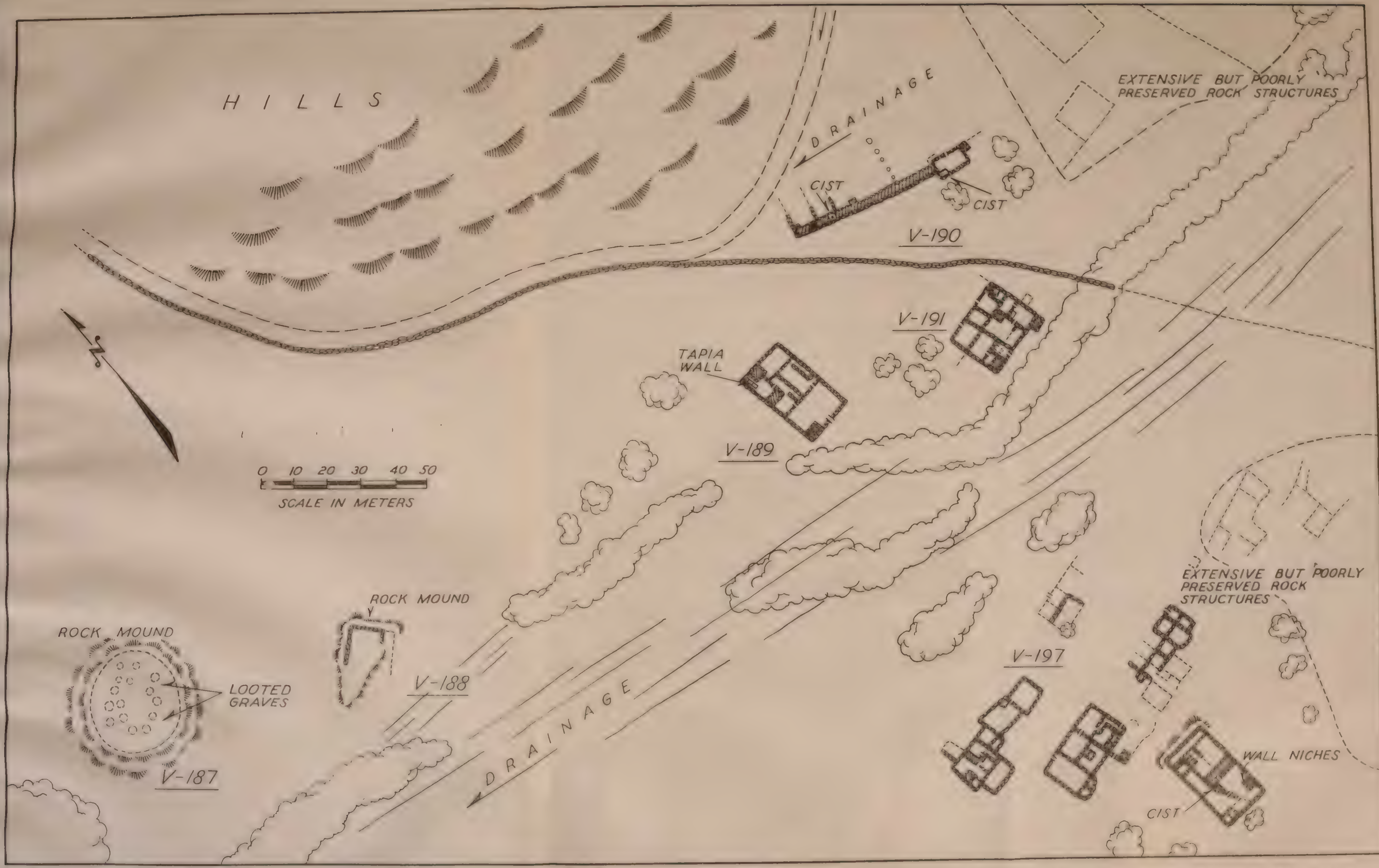
HILLS
DRAINAGE
CIST
CIST
V-190
EXTENSIVE BUT POORLY PRESERVED ROCK STRUCTURES
V-191
TAPIA WALL
V-189
N
0 10 20 30 40 50
SCALE IN METERS
ROCK MOUND
ROCK MOUND
LOOTED GRAVES
V-187
V-188
DRAINAGE
V-197
EXTENSIVE BUT POORLY PRESERVED ROCK STRUCTURES
WALL NICHES
CIST

FIGURE 54.—Ground plan of sites V–187, V–188, V–189, V–190, V–191, and V–197. V–187–188 probably built in Puerto Moorin times but added to or re-used during the Huancaco Period; V–189, V–190, and V–191 date as Tomaval; and V–197 as La Plata Period.

still stand 1 meter high, and there is enough fallen rock strewn about to indicate that they may once have been higher. There are five exterior entrances so that every room may be entered from the outside. Interior doors connect some, but not all, of the rooms. The largest room is 16 by 9 meters and the smallest 10.5 by 5 meters. There is a

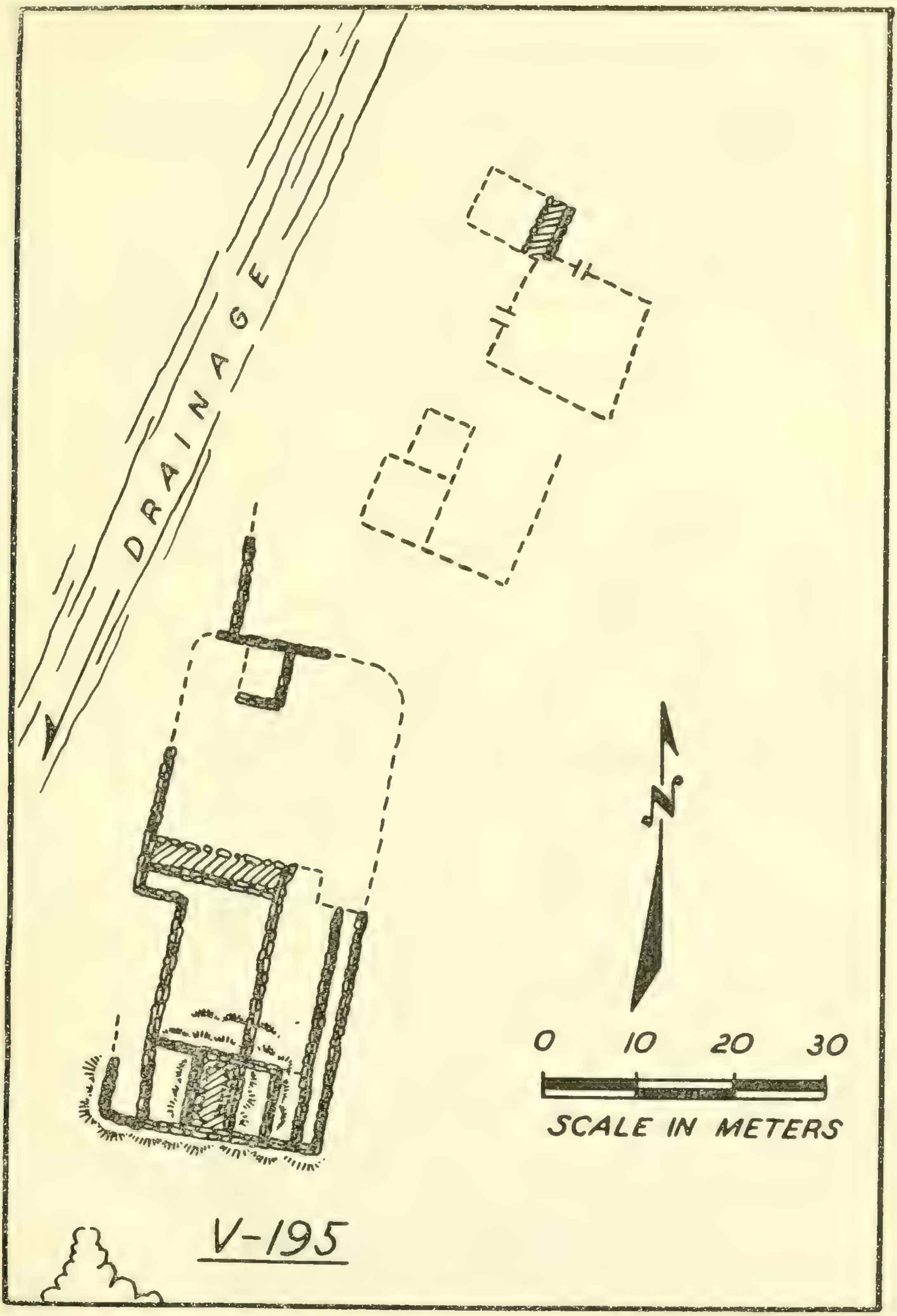

FIGURE 55.—Ground plan of V–195. Tomaval Period.

quarter-circle platform or banquette in the corner of one room. Attached to the east exterior is a small walled platform or room with a raised floor.

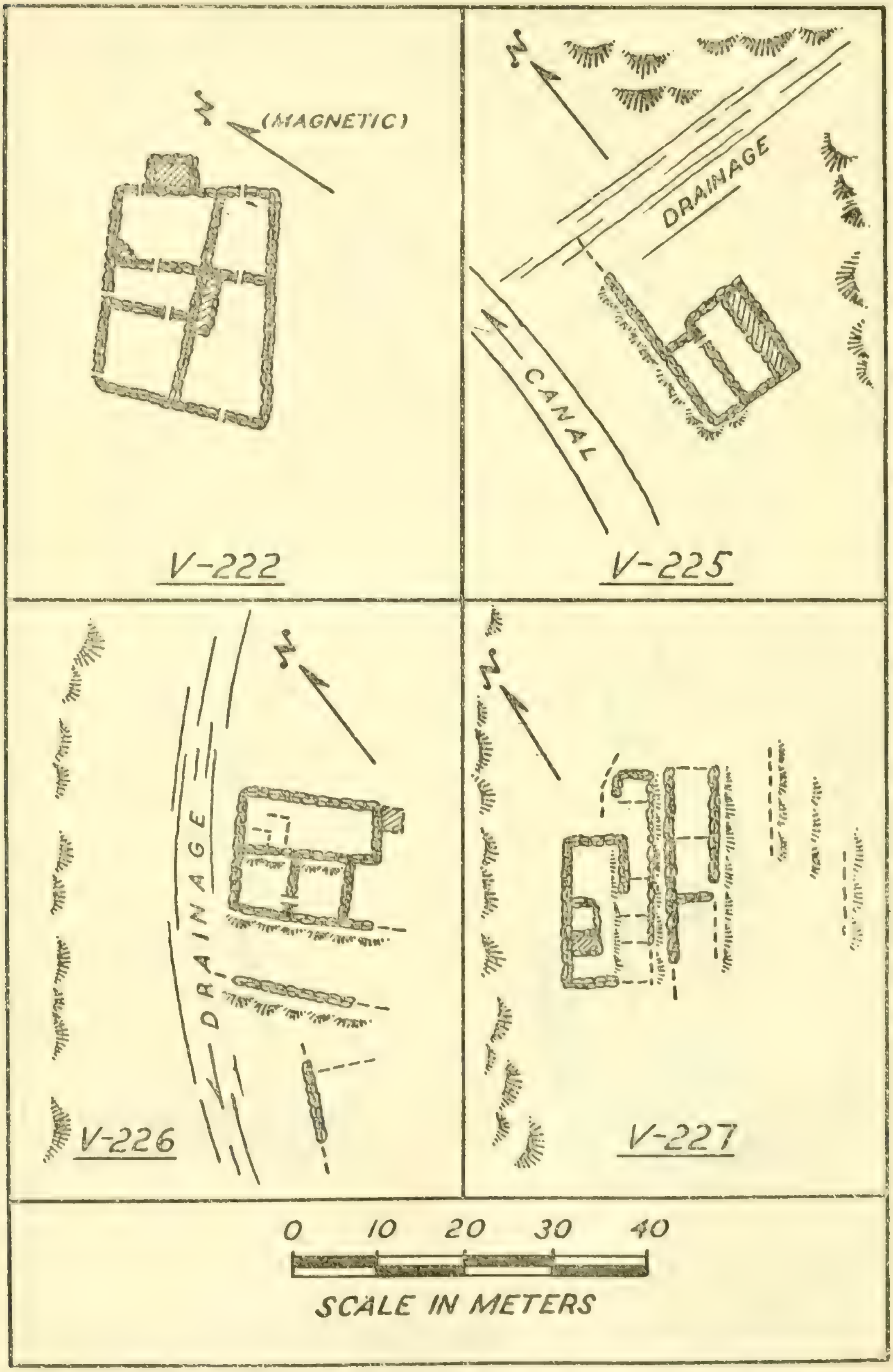
(MAGNETIC)
V-222
DRAINAGE
CANAL
V-225
DRAINAGE
V-226
V-227
0 10 20 30 40
SCALE IN METERS

FIGURE 56.—Ground plans of V-222, V-225, V-226, and V-227. All date as Tomaval Period.

Not many sherds were found. A collection of some 50 pieces is dated as Tomaval but rated as poor.

V–225.—In Huacapongo-North (Quad F–2, northwest), at the mouth of a small quebrada, there is a two-room Semi-isolated Large House of cyclopean masonry (pl. 36, *center*). The walls are 50 cms. wide, double-faced, smooth, and constructed of angular-fractured rock rather than waterworn boulders (pl. 36, *bottom*). The two rooms (fig. 56, *upper*, *right*) are on separate levels because of the natural slope of the quebrada. The lower room is 10 by 4.5 meters, and the upper 11.5 by 7.5 meters. A banquette stretches along the interior east wall of the upper room. I noted no outer doors, but there is a connecting doorway between the two rooms.

The lower or west wall of the house continues to the north for several meters beyond the rooms described. It may be that other rooms joined these and that they have been destroyed by a drainage wash which passes just to the north of the site.

The major upper canal of the Huacapongo passes just 10 meters below the house site.

V–226.—A few hundred meters west of V–225 there is another Semi-isolated Large House on a steep slope of the lower flanks of the hills bordering Huacapongo-North (Quad F–2, northwest). Its boulder masonry walls have been leveled by alluviation except where they serve as terrace retainers. The building, 15 by 14 meters, has been divided into three rooms, two of which are on one terrace level and the other on the next terrace above (fig. 56, *lower*, *left*). There is a small rectangular platform of earth adjoining the outer southeast wall of the upper terrace room. On a still lower level, to the southwest of the building there is another house terrace which is faced with a wall.

Ford's large collection from here is dated Tomaval but with a poor rating.

V–227.—This is a hillside terrace Irregular Agglutinated group located in Huacapongo-North near V–225 and V–226 (Quad F–2, northwest). That portion of the site mapped (see fig. 56, *lower*, *right*) consists of two long rectangular buildings each of which is divided into several rooms. Construction is the usual double-faced cyclopean stonework. The uppermost building has been constructed upon two terrace levels, and is 24 by 6.5 meters. Inside, on the higher level, is a small room which is adjoined by a raised banquette. On the lower terrace level of this same building there were probably five medium-small rooms. The second building is similar to the first.

Other structures were seen at some little distance up the slope from V–227. They represent two or three times the living space recorded for V–227, proper.

In the immediate neighborhood is a good deal of refuse, and there are several old grave excavations.

Ford's collection of almost 300 sherds is dated as Tomaval and has an excellent rating.

V-246 (*Calunga Compound*).—The Calunga Compound lies in the Valley floor of Lower Virú-North about 2 kilometers northwest of the Hacienda Calunga (Quad C-3, southwest). This land was under cultivation in 1946.

We did not map this site, but visited and collected from it. It was largely constructed of tapia adobe (pl. 40, *center*) which had been poured in sections. The walls were 1.5 meters wide at the base with a gradual batter toward the top. In some places the upper portions of the walls were constructed of plain rectangular adobes (38 by 16 by 16 cms.) (pl. 40, *bottom*). In general, the ruin is fairly well preserved, and wall heights of 2 meters or over were noted.

The site consists of two Great Rectangular Enclosure Compounds. There are no partitionings or interior rooms evident in either compound. The larger and better preserved quadrangle measures 130 by 75 meters (measurements taken from air photo). It is oriented with the long axis extending northwest-southeast. The smaller and less well preserved quadrangle lies about 70 meters east of the larger. It is also oriented northwest-southeast, and measures about 100 by 50 meters. In addition, it appears on the air photos as though there may have been another enclosure attached to the northeast side of this second one. This attachment, if such it is, has dimensions of approximately 50 by 30 meters.

Very few potsherds could be found around these big adobe quadrangles. Modern cultivation may be the reason for this. A collection of some 50 sherds was picked up, and Ford dates these as Tomaval but with a poor rating.

V-282 (*La Centinela*).—On the bluff overlooking the beach, well up the coast from the Virú Valley proper, is the site, La Centinela. It occupies the highest coastal point for several kilometers in either direction (Quad B-2, southwest), and is the northernmost site visited by our survey in the Lower Virú.

Of particular interest is the fact that La Centinela marks the northwestern terminus of the "Inca Road." This prehistoric road, which may date earlier than the Incaic or Estero Period (see pp. 370-371), is the outstanding prehistoric road of the Valley. It enters Virú from the sandy flats between the beach and hills of Lower Virú-South and cuts across the Valley in a straight line from southeast to northwest (see fig. 2). Only two of our Virú survey sites are located upon the road. One of these, V-288, is a Huancaco Period Isolated Pyramidal Mound of adobe; the other is La Centinela. The key location of La Centinela suggests a functional relationship between the site and the ancient highway. La Centinela may have been a *tambo* or control point on the road, and, if so, the road was in operation during the Tomaval Period.

The V–282 site itself is a Semi-isolated Large House. The outline is, by implication, rectangular although one complete side (the northeast side) is missing. The rectangle measures 20 meters northeast-southwest and 24 meters northwest-southeast. Gaps, probably doors, were found in the middle of the southeast and northwest sides. It is possible that the northeast side has been covered up with sand or that stones have been removed. Near the north corner of the building is a circular stone foundation about 5 meters in diameter.

Over 100 potsherds came from the building and its environs. They are dated as Tomaval, with an average rating.

V–297 (*Delta site*).—This is an adobe-walled Rectangular Enclosure Compound on the north bank of the Virú River a little less than 1 kilometer from its mouth (Quad B–5, southeast). The rectangle measures 64 by 50 meters (fig. 57). Construction is largely in tapia sections. This is particularly true for the outer or enclosure wall. This wall is 1 meter wide at the base. Within the enclosure, the upper sections of some of the partitioning walls are made of plain

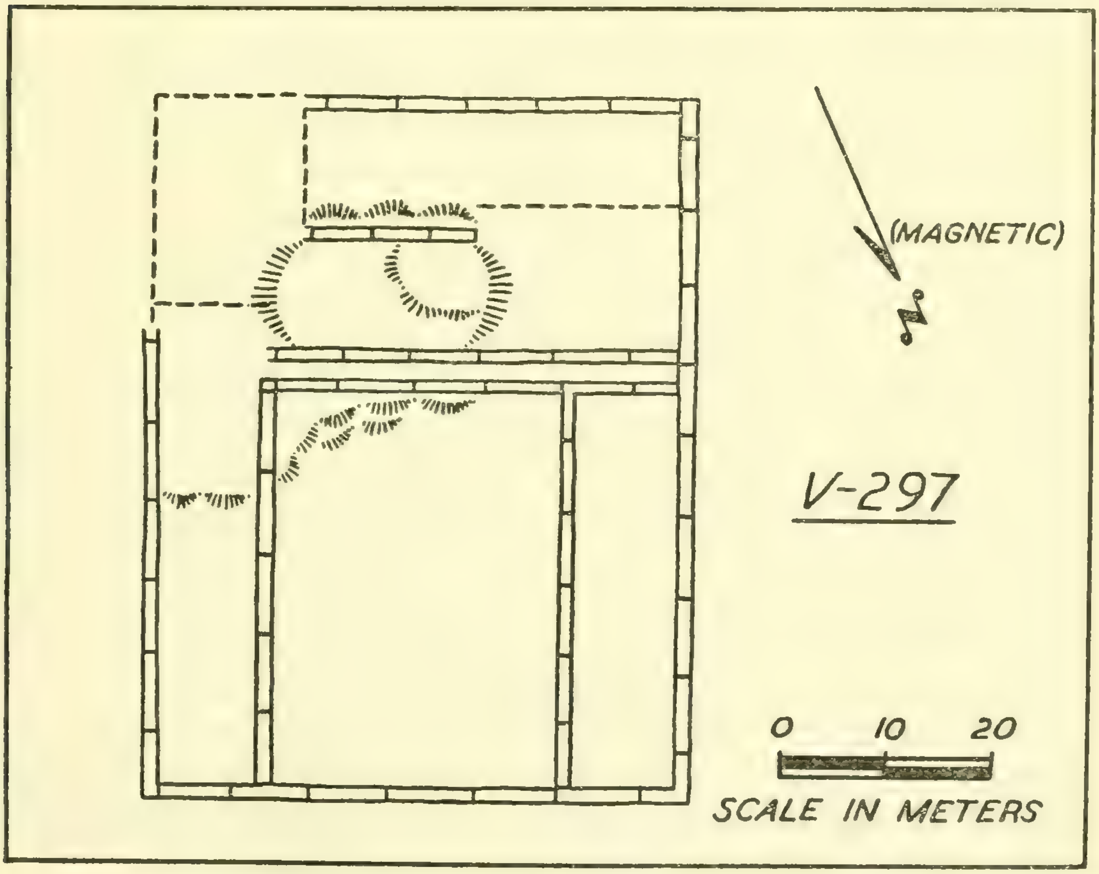

FIGURE 57.—Ground plan of V–297. Tomaval dating.

rectangular, mold-made adobes (36 by 19 by 13 cms.). Throughout, most walls have melted or worn down to ridges of yellow clay. These rounded ridges still stand from 1 to 1.5 meters high.

There is a large, courtyardlike room in the north-central part of the building which measures 37.5 by 27.5 meters. It is flanked by two long rooms, each 11 meters wide. Behind the courtyard is a narrow gallery, 2.5 meters wide, which probably once extended across the quadrangle. Back, or south, of this there are other rooms, but the floor plan is not clear. In one place what seems to have been a mound or platform, about 2 meters high and 23 by 11 meters at the base, is situated between two adobe walls.

Pottery was not abundant on the surface, but a collection of 120 sherds was picked up. This material was dated as Tomaval, and has an excellent rating. Following our survey at this site, Donald Collier made some test excavations within and around V-297. He reports no refuse of any consequence.

V-22.—This is a single-roomed, rock-walled Semi-isolated Large House situated at the foot of the outwash plain in the quebrada below Cerro Niño, Huacapongo-North (Quad E-1, southeast). Walls of the building are 85 cm. wide, and masonry is of unworked boulders set in mud. A low foundation, less than 1 meter high, remains. It is possible that interior partitions once divided the building. Measurements were not taken, but estimated dimensions are a little over 10 meters square.

Fifty-three sherds are placed as Tomaval and 13 as Early Puerto Moorin. The similarity of the building to Tomaval structures, particularly in its size, backs up a Tomaval identification.

V-24.—This is a rock-walled Irregular Agglutinated house group in Huacapongo-North (Quad E-1, southeast). It consists of a single, connected group of about 24 rooms (fig. 51) and a few semi-isolated units of one to three rooms each. The site was once a little larger, but some rooms have been destroyed. Most room foundations are about 10 by 9 meters or a little smaller. There are also rooms of about 5 by 4 meters, and in one large room there are two small binlike compartments, perhaps 1.5 by 1.5 meters apiece.

Several rooms have banquette features. In one case, these extend around three sides of a room. In another instance, a wide banquette or low platform is surmounted by another platform. Some of the larger rooms show doorways opening on the outside.

In general, the rooms are squared and in alinement with one another, although the site as a whole is not a carefully planned layout. It is possible that two more or less rectangular units, of six or seven rooms each, were later joined by placing two conjoined rooms between them.

Ford's collections from here break down into one of about 200 sherds which he dates as Tomaval and another of over 100 sherds dating from Early Puerto Moorin. Both of these datings are rated as poor. The structural similarity of V–24 to other nearby sites which showed only Tomaval Period ceramic components leads me to believe these particular buildings date from this period.

V–26.—This is an Irregular Agglutinated arrangement of stone-walled rooms in Huacapongo-North (Quad E–1, southeast). It lies within 30 to 50 meters of sites V–24, V–25, and V–27, all of which date from the Tomaval Period. The site consists of eight conjoined rooms and four or five other rooms that may have been connected with each other at one time (fig. 51). There is one large room, 16 by 11 meters, which is broken only by a small closetlike room in one corner. Other rooms are in the size range of 5 to 6 meters. There is a banquette in one of these rooms. One room, with a doorway opening on the outside, is oval in form rather than rectangular. It has the appearance of having been added or fitted in after the other rooms were constructed.

A collection of over 600 sherds dates as Tomaval with an excellent rating. Only 28 sherds belong to the Early Puerto Moorin Period component. Ford rated this second dating as average. The preponderant ceramic evidence, plus the similarity of these structures to those of unmixed Tomaval dating, place the building as Tomaval.

V–29.—This is another Irregular Agglutinated rock-walled group in Huacapongo-North (Quad E–1, southeast). It, too, is in the neighborhood of the sites (V–24 to V–27) to which we have just referred (fig. 51). The buildings have suffered more than most in the immediate vicinity from flood destruction. Traces of 15 rooms can still be seen, and originally the complex probably was larger than this. Most of the rooms fall within the size range of 4 by 5 to 7 by 9 meters. Along the wall of one room there are faint evidences of three small, binlike compartments.

At the east side of the site there is a low, rectangular, flat-topped mound of earth and stones. It is about 11 by 13 meters. There are no structures upon it although it may have been a house platform.

The Tomaval component here is small: 28 sherds. Ford rates this as poor as to validity of dating. There is a much larger (103 sherds) Early Puerto Moorin component. In spite of this, I am inclined to date the building as Tomaval, in view of its similarity with other structures of this period.

V–50.—Near the southwestern edge of the Queneto quebrada floor there is an Irregular Agglutinated group of rock-walled rooms situated at the end of one of the major walls that cross the quebrada (Quad E–2, northwest) (fig. 39). There are seven rooms, most of which are not parallel-sided. Three of the rooms are large, the largest being 16 by 10 meters. There is a banquette along one wall of this room, and there are banquettes in some of the smaller rooms. One room has three low terrace levels within it.

It appears as if V–50 was attached to the big wall referred to above. Most of the rooms are appended to the down-slope side of the wall, but there are two small ones attached to the uphill side.

A large collection of over 500 sherds is given a mixed dating of Huancaco-Tomaval. Ford rates the placement as poor.

V–78.—There is a small group of Semi-isolated Large Houses on the sandy pampa of Middle Virú-South at a point about 1 kilometer above the Pan-American Highway (Quad E-4, northwest). The site consists of at least five units within a radius of 50 meters. All but one are single-room affairs (fig. 58). The stone foundations are 65 cms. wide and composed of rather small boulders. There is very little stone on the site, and it is likely that the superstructures were made of adobes. The houses seem to have been oriented without any particular reference to each other or to a general plan. One room has some poorly defined interior partitions; the others have none.

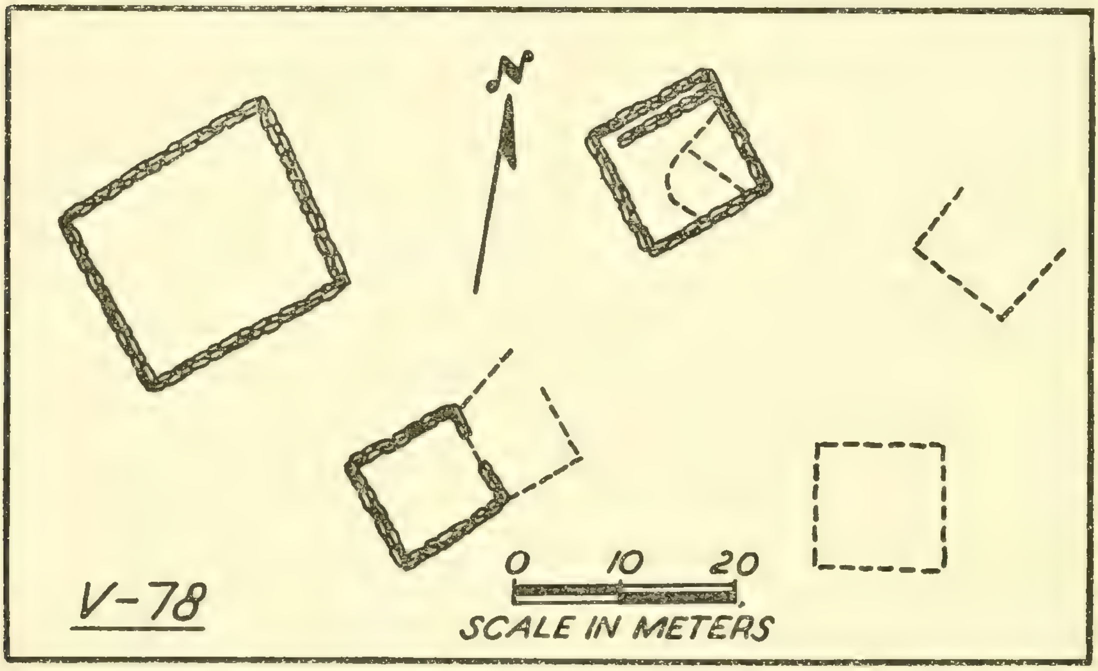

FIGURE 58.—Ground plan of V–78. On flat desert terrain. Probably dates as Tomaval Period.

Excavations were made in the corner of the largest building. The stone foundation was followed down for a little over 1 meter. The most characteristic feature of the masonry was the abundant use of mud mortar. No prepared floor was encountered.

The size of the rooms or buildings ranges from 22 by 18 down to approximately 10 by 10 meters.

A component of 132 sherds dates as Tomaval, with an excellent rating. The other component of 313 sherds has a similar excellent rating but with an Early Puerto Moorin date. This is a difficult site to date. The pattern of the houses, their single-room construction and their scattered distribution, is reminiscent of the Puerto Moorin and Guañape Period sites, particularly those of the Cerro Compositan group (V–83, 85, 87). On the other hand, the size and definite rectangularity of the foundations are more in line with what we know of Tomaval Large Houses. Very tentatively, I place V–78 as Tomaval Period.

V–123 (Estero Compound No. 1).—The Estero Compound sites are situated on the flats a little less than a kilometer north of the mouth of the Virú River (Quad B–5, northwest). Both sites (V–123 and V–124) are at the border between cultivated fields and beach wastelands. V–123 (Compound No. 1), the smaller of the two, is closer to the beach and 200 meters south-southwest of V–124.

V–123 is enclosed in a single, planned Rectangular Enclosure Compound. Orientation of its longer axis is somewhat east-of-north by west-of-south, but for simiplicity in discussion we will treat the building as if it were oriented to the cardinal points. The enclosure is not quite a perfect rectangle (see fig. 59). The north and south sides each

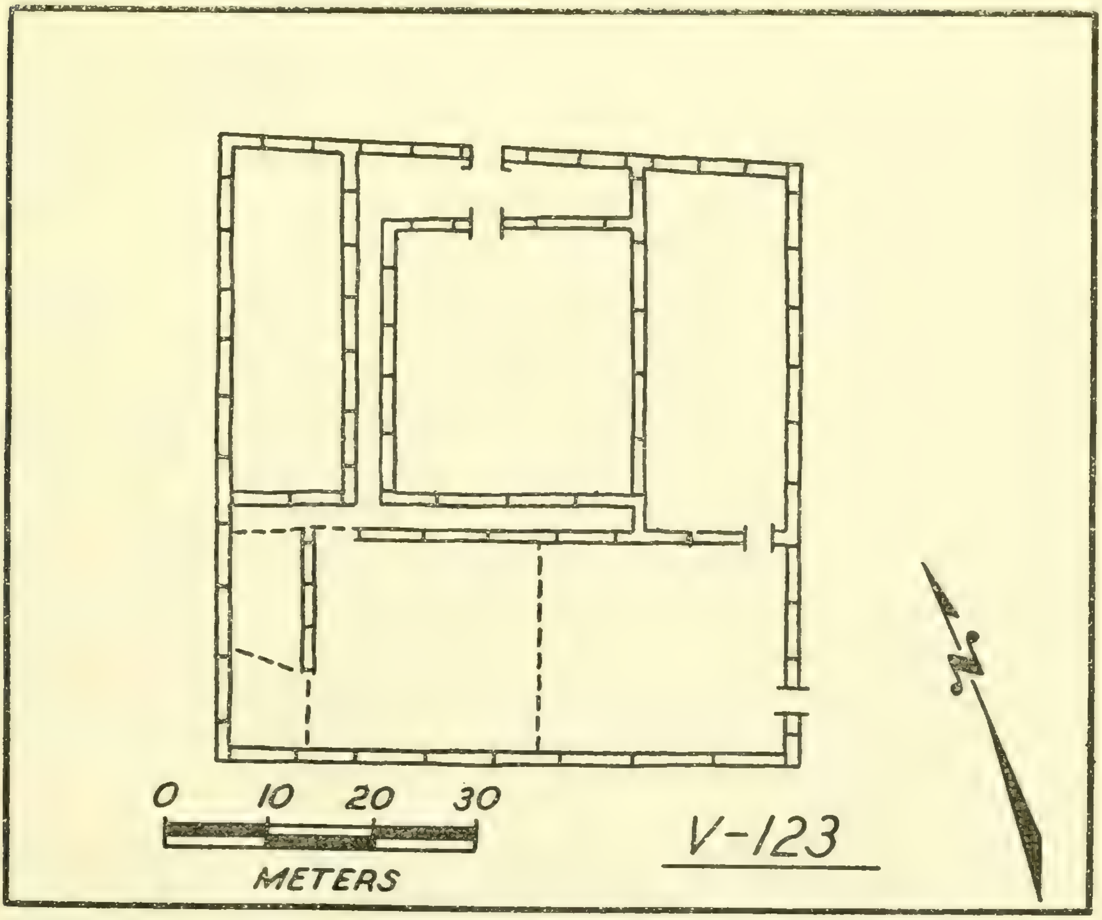

FIGURE 59.—Ground plan of V–123. Tomaval Period.

measure 54 meters, but the east side is 56 while the west is 59 meters long. The main entrance appears to have been on the north side, almost in the center of the building. This gate opened into a narrow corridor room running east-west in the building. Crossing this corridor, one enters a second doorway into a large rectangular room or courtyard, 26 by 23 meters. Besides the corridorlike room on its north side, the courtyard was bounded on its west and south sides by a quite narrow corridor. Flanking the court, on the east and west, are two large rooms. The one on the west, which is separated from the court by the afore-mentioned narrow corridor, is 34 by 12 meters. The east room is 35 by 14.5 meters. Along the south side of the enclosure there are two rooms, 22 by 22 and 22 by 25 meters, respectively. There are also two smaller rooms in the southwest corner, each 8 meters wide and 8 and 10 meters long. The foundational evidence in this part of the building is, however, poor, and I may be wrong in my mapping of these partitions.

There is another outside doorway, besides the one on the north side of the compound. This one passes through the east wall into the southeast corner compartment. A doorway can also be seen entering the long east room which flanks the court. This entrance, the only partition doorway of which I could be sure, comes in from the southeast corner room.

The walls of V–123 are made of adobe of which the base was tapia and the upper portions brick-shaped or rectangular adobes. The size of the adobes varies from 40 to 25 cm. in length, and some of them appear to be hand-made. There are places in the V–123 wall which still stand 1.5 meters high. I recorded no basal thickness measurements, but I would estimate 75 to 100 cm.

Ford and I picked up over 200 potsherds from within and immediately around the walls of the site. This material is dated as Estero Period, and has a poor rating. Fifty meters from the southeast corner of the V–123 compound there is a refuse pile 25 by 15 meters in diameter and 2 meters deep. This is site V–301 (see p. 278), which Collier excavated and demonstrated to be entirely Tomaval Period refuse. The proximity of this midden to V–123, plus the very close similarity in architectural layout between V–123 and the Tomaval site V–297, lead me to believe that V–123 was constructed in Tomaval times. Evidently, it was reoccupied, or used as a trash dump, in the Estero Period. The nearness of V–124 (pp. 324–329), which also has a heavy Estero refuse accumulation, could account for the Estero pottery debris at V–123.

V–130.—This site (Quad C–4, southwest) has been discussed under the Huancaco Period as a Castillo Fortification Complex. In that discussion (p. 227) we referred to some adobe platforms constructed upon the summit of the V–130 hill or ridge. That part of the site was referred to as the "upper section." It is the "lower section" of V–130 which now claims our attention.

On the flank of the hill, facing south, and reaching from the foot some two-thirds of the way to the summit, is a large adobe Rectangular Enclosure Compound. The outer walls are entirely of tapia, 2.1 meters wide and poured in sections 2.7 meters long. The walls of the longer axis of the building have been constructed in well-defined steps, so that from the side the building has a stepped or terraced appearance. These steps in the walls conform to the terracing of the hill slope which accommodates the interior rooms and divisions of the rectangle (pl. 47, *bottom*, *left* and *right;* pl. 56, *bottom*).

Inner room partitions are narrower than the outer walls and are made up entirely of brick-shaped adobes. These are plain blocks but may be hand-made rather than mold-made.

The rectangle of the enclosure has a slight bulge on the northwest side (fig. 60). Its length is 92 meters (from midpoint to midpoint on the walls); width at the upper (or northeast) end is 29 meters; and width at the bottom (or southwest) end is 25 meters. The main gate of the enclosure is on the southeast side a little over 20 meters up from the south corner of the building. This gateway is a little less than 2 meters wide and opens into a large compartment which occupies the second terrace (from the bottom) of the enclosure. Most rooms or divisions are large, although there are some smaller rooms. About halfway up the slope, a little to one side of center, is a solid adobe block or platform, 7 by 6 meters. In the upper portion of the enclosure there are two large natural rock outcrops.

Very few potsherds were found within this lower section of V–130, and those which were recovered were incorporated in the collection for the total site, to which a Huancaco Period dating was assigned. This dating, while consistent with the type of structure which we found on the summit, conflicts with the massive-walled tapia adobe compound. The enclosure is almost certainly from the later periods (Tomaval-La Plata-Estero). The dimensions and interior divisions of the V–130 rectangle are closest to the La Plata Compound (V–108); however, the manner of its construction, with thick tapia walls, is more like the Great Rectangular Enclosure Compounds of the Tomaval Period. In this connection, it is noted that nearby, in a corner of the hills on which the site is situated, there is a cemetery (V–129) which dates as both Huancaco and Tomaval. If the Huancaco burials in this cemetery correspond to the construction and use of the castillo of upper V–130, perhaps the Tomaval burials similarly correspond to the construction and occupation of the compound of the lower site.

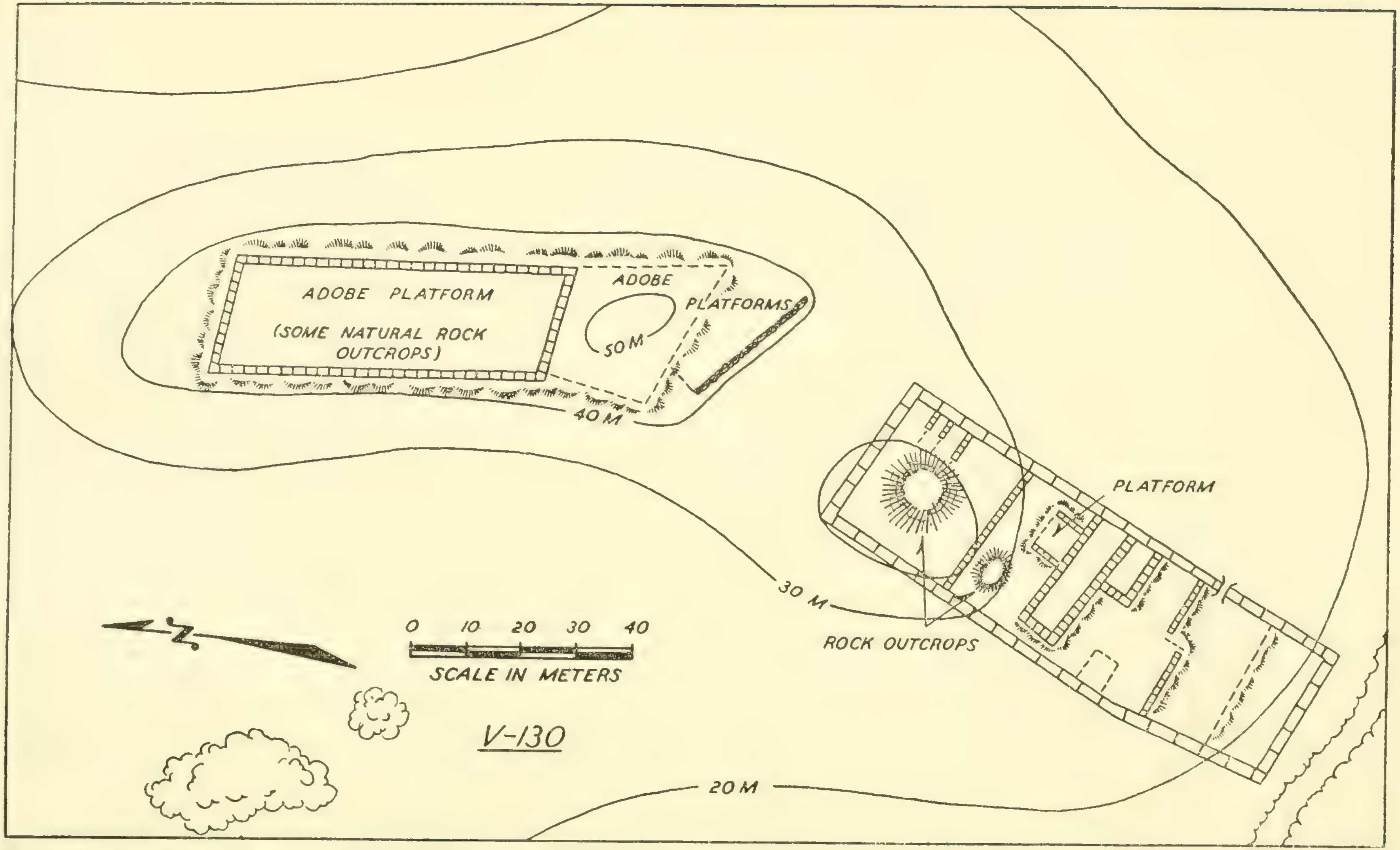
ADOBE PLATFORM
(SOME NATURAL ROCK OUTCROPS)
ADOBE
PLATFORMS
50 M
40 M
PLATFORM
30 M
ROCK OUTCROPS
0 10 20 30 40
SCALE IN METERS
V-130
20 M

Figure 60.—Ground plan of El Cerrito (V–130). Dating questionable but lower building probably Tomaval while upper platform is Huancaco Period.

V–143.—This possible Compound Village site is in Huacapongo-North (Quad E–1, southeast). It has been described for the Huancaco Period (see pp. 197–198) (fig. 42). As stated there, it is my opinion that the present foundations date from either the Huancaco or Tomaval Periods or, perhaps, both. An Early Puerto Moorin ceramic component is also represented on the site, but I believe that it precedes the buildings.

V–171.—This is one of the largest sites, in extent of structures, in Virú Valley. It is not well known because it is almost completely obscured by heavy *monte* growth. The location is in Lower Virú-South at a point about 4 kilometers south of the Pan-American Highway and a little less than 1 kilometer from the river (Quad C–4, northeast). Air photos show occasional sections of the walls of V–171, but do not disclose the complete site. The map (fig. 61) is based, in part, on the air photo projections but mostly upon ground measurements and explorations.

There are two Great Rectangular Enclosure Compounds. Quadrangle A, which is the more southerly of the two compounds (see pl. 38, *top*), has over-all measurements of 130 meters (northwest-southeast) by 128 meters (northeast-southwest). There are three large divisions, each 95 meters on one dimension and, respectively, 65, 102, and 60 meters on the other. In the central of these three divisions there are vague suggestions of another large subdivision, but this cannot be confirmed without excavations (see map, fig. 61). There are two Earth-Refuse Mounds within this central division, one 10 meters in diameter and the other 33 by 12 meters in extent. Neither is more than a meter or two in height, but Collier's excavation (pl. 39, *top*) in the larger showed the refuse to go down for a depth of 4 meters. In other words, there is considerable refuse depth in all parts of the enclosure. There are also two sizable depressions in this central division of Quadrangle A. These are 10 and 25 meters in diameter but not of great depth. It is likely that they are now rubbish filled. Perhaps, originally, they were water reservoirs.

In the southeastern of the three main divisions of Quadrangle A there is a refuse pile, similar to those in the central division, which is 20 meters in diameter. Collier also excavated here.

The northwestern division of Quadrangle A is probably empty of features, although I did not explore its bush-grown northwestern corner.

Along the northeast side of Quadrangle A there are several smaller subdivisions. Some of these may have been roofed rooms, although even the smallest is 10 by 20 meters.

Quadrangle B is more heavily overgrown than A, and my explorations there were less detailed. As far as I could see from surface

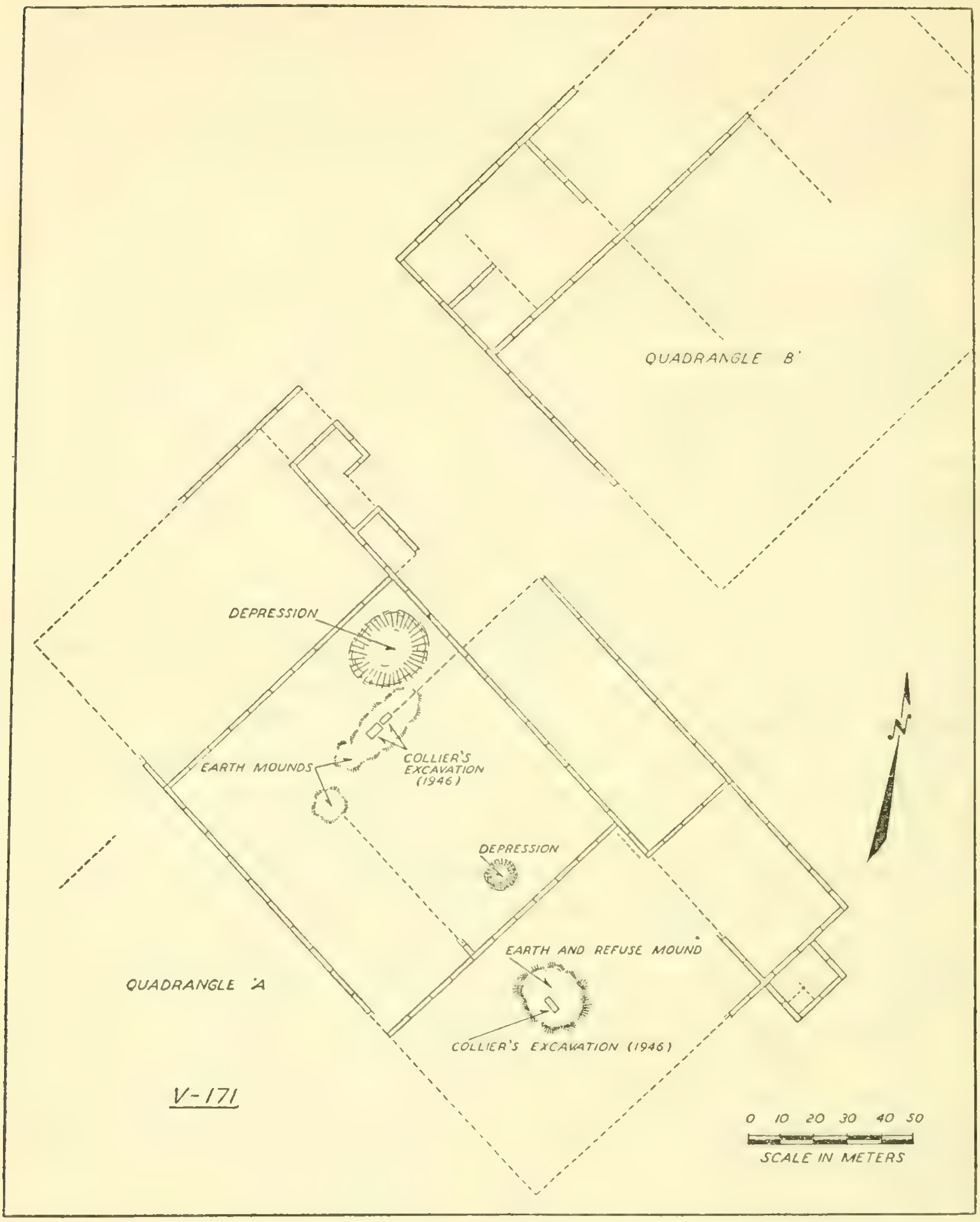
QUADRANGLE B
DEPRESSION
EARTH MOUNDS
COLLIER'S EXCAVATION (1946)
DEPRESSION
EARTH AND REFUSE MOUND
QUADRANGLE A
COLLIER'S EXCAVATION (1946)
V-171
N
0 10 20 30 40 50
SCALE IN METERS

Figure 61.—Ground plan of V–171. Tapia adobe quadrangles. This site is covered by extremely dense *monte* growth which precluded complete mapping. Structures date as Tomaval with continued use in La Plata and Estero Periods.

evidences, it was structurally detached from Quadrangle A and at a distance of 35 meters to the northeast. I am not certain as to the overall measurements of Quadrangle B, but my estimates (see map, fig. 61) are 140 by 164 meters. Only the southwestern section of the quad could be mapped with any accuracy. As with A, there are suggestions that Quadrangle B was divided into three main divisions running at right angles to the long axis of the compound. A longitudinal division, similar to that of Quadrangle A (but on the northwest rather than the northeast side), is adjacent to these three main horizontal divisions. And, as with Quadrangle A, again, this longitudinal division was subdivided into relatively smaller compartments or rooms. Two of these in Quadrangle B are each 20 meters square.

All construction that I observed in V–171 was tapia adobe (pl. 38, *center*). Walls had been poured in sections 1.5 to 2 meters in length and in alternating layers of 9 and 27 cm. (pl. 38, *bottom*). Wall width varied with the outer walls of the quadrangles being the most massive. These had bases 2 meters in thickness with a batter on both sides (pl. 39, *bottom*). Some interior walls were as narrow as 60 cm. Wall height was as much as 3 meters or over in some places. I noted no doors or gateways. In one place an "arch" has been cut through a wall by natural erosive processes (pl. 38, *top*).

Ford's collection of 626 sherds, gathered from the surface of Quadrangle A, is given an excellent rating date of Estero Period; but Collier has observed that the wall base foundations in V–171 rest on Tomaval refuse of the latter half of that period. It is most likely that the walls were constructed during Tomaval times although the site continued to be occupied through the La Plata and Estero Periods.

V–183, *V–184.*—These two sites, located side by side, are on the outwash plain of Huacapongo-North (Quad F–1, southwest). They lie just above the lower, or southernmost, of the two major walls that run along the north side of the Huacapongo quebrada. Just below this wall is a canal and below the canal are large irrigation or cultivation terraces. These are the terraces mentioned in connection with sites V–35 and V–36 (which are 400 meters to the west of V–183–184) (see also pp. 245–246).

V–183 has a fairly compact arrangement and looks as though it may have once been a Rectangular Enclosure Compound but had later additions of small rooms attached to its east side (fig. 62). A small drainage has cut through the middle of the site, and, probably, has destroyed some of the room patterns. In spite of this, we can make out two rather large rooms, one at each end of the building. One of these is 10 by 15 meters but incorporates a row of small rooms, 1.5 or 2 meters square, along one wall. The other big room is long and relatively narrow, being 18 by 6.5 meters. The remaining rooms run from 7 by 6 meters down to 3 by 3 meters, and their disposition appears to follow no clear pattern. Subfloor, stone-lined cists, both rectangular and ovate in shape, are found in the rooms and outside of the building. One room has a raised floor with a small depression (possibly a cist) in the floor. Another room has a banquette along one side.

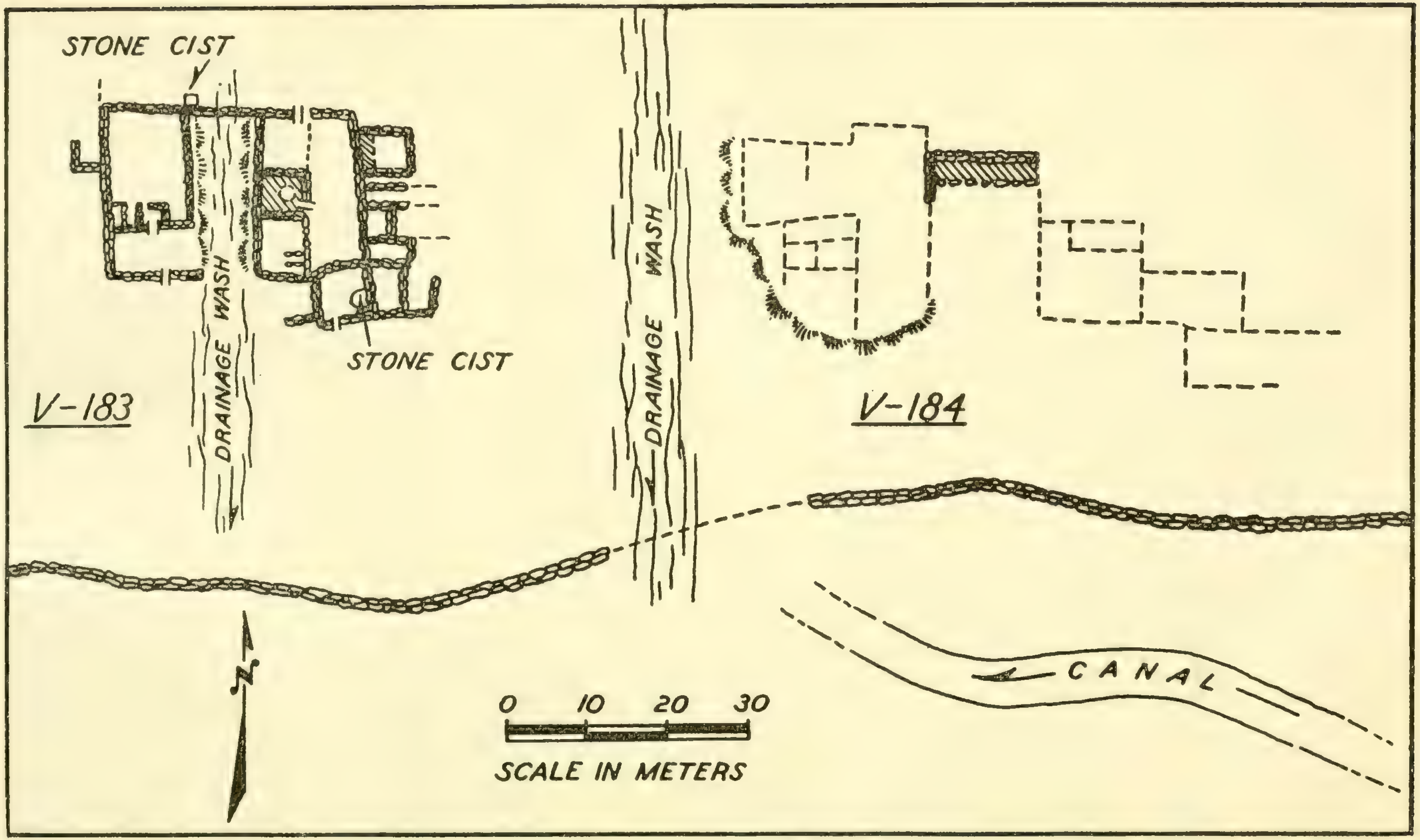
STONE CIST
V-183
DRAINAGE WASH
STONE CIST
DRAINAGE WASH
V-184
CANAL
0
10
20
30
SCALE IN METERS

FIGURE 62.—Ground plan of sites V-183 and V-184. Tomaval Period.

Walls average about 60 cms. in width and are of stone. There are several doorways, both outer entrances and between rooms. One of these doorways has a Z- or S-shaped passage. Donald Collier, who visited the site with me, made the observation that this form of door passage is characteristic of the Late Periods in the Casma Valley.

V–184 is 35 meters east of V–183 and separated from it by a drainage (fig. 62). Possibly, the buildings were once connected by continuous construction, but there is no evidence of it now. V–184 is less well preserved, but the room foundations which could be traced gave indications of an Irregular Agglutinated building group. Several large rectangular rooms extend off to the east. One of these rooms has a broad banquette along one wall.

At the western end of the site there is a hummock of what appears to be refuse. This little knoll rises from 1 to 2 meters above the level of the rest of the site. Rock-wall foundations were either put down on top of this hillock or they still show through the refuse. Three small, connected, rectangular room foundations crown the summit of the knoll. These rooms are connected with other walls of the site.

Both V–183 and V–184 yielded surface collections of close to 300 sherds each. In both sites, Tomaval Period material outnumbered the Early Puerto Moorin types by over 2 to 1. A Tomaval Period dating of the structures is most likely.

V–189.—This is another rock-walled foundation of a Rectangular Enclosure Compound (fig. 54). It is on the flood plain of the upper part of Huacapongo (Quads G–1, southwest, and G–2, northwest). A similar rectangular compound of the Tomaval Period, site V–191 (see p. 251), is 35 meters to the northeast. The orientation of the rectangles seems to be without particular reference to each other.

V–189 is 27.5 by 16 meters. It has four principal rooms, and four small binlike rooms, all of which have platform or raised floors of earth and rock. There is also a long, narrow gallerylike room which serves as a passage between two larger rooms.

In one interior corner of the building there is a section of a tapia adobe wall. It is constructed on floor level like the rock walls, but its structural relationship to the other walls and rooms is not clear. There is only one doorway leading to the exterior of the building but there are several openings between rooms.

Almost 200 potsherds from V–189 date as Tomaval, and their rating is excellent. A few sherds in the collection are of Early Puerto Moorin types, but there is little doubt, from both ceramic and architectural indications, that the site is Tomaval Period.

V–204.—V–204 is a cluster of rock-walled rooms in Huacapongo-North (Quad E–1, southeast). It has been discussed under sites of the Puerto Moorin Period (p. 78). No collection was made here, and the dating is based upon casual observations which I made of surface pottery at the site and upon the buildings themselves.

The site extends over an area 100 by 50 meters. The northernmost buildings are small and consist of two or three rooms. I feel that these represent an earlier (Puerto Moorin) occupation (fig. 38). The southern part of the site is an Irregular Agglutinated cluster. It is possible that these are structures related to the Tomaval pottery at the site. There are also a number of circular, stone-lined cists which have been excavated at some time in the past. Human bone scrap and potsherds strewn around these excavations would indicate that they were graves of the Tomaval Period.

V–209, V–210.—These sites are on the slope of a spur which juts out from the hills bordering Huacapongo-South (Quad E–2, northeast). V–209 is a Semi-isolated Large House of two rooms situated on the tip end of the spur which, at this point, is only 2 or 3 meters above the Valley floor (fig. 63). The rock-walled foundation has dimensions of 11 by 6 meters. Within is a small corner room.

Ford's V–209 analyses of pottery give one dating from the Huancaco, Tomaval, and Early Puerto Moorin Periods. The validity of these datings is rated as average, average, and poor, respectively.

Site V–210 begins at a point about 40 or 50 yards up slope from the V–209 building. This site consists of a series of Irregularly Agglutinated house platforms which are terraced upward along the crest of the spur for a distance of 100 meters. This crest is rather narrow (less than 30 meters) and the platforms and house foundations are confined to it. Double-faced stone masonry wall foundations can be traced on many of the terraces, but fallen rock from walls is not common. Many of the platforms are piled full of soft ash and rubbish.

The building foundations are mostly elongated rectangles varying from 6 by 10 to 7 by 12 meters, but there are some smaller building bases. The map (fig. 63) does not give an adequate picture of the number of platforms and house foundations that probably once were in use on the site. The ones drawn are those which could be traced most clearly.

Of interest, also, are foundations which lie in the quebrada bottom off the east side of the spur. These were roughly sketched in. They may or may not pertain to the V–210 occupation.

Ford's collection came from the platforms and foundations on the spur, alone. He has two components. The earlier, Early Puerto Moorin, consists of some 500 sherds; the later, Tomaval, of about 200 sherds. It is likely that the terrace arrangement of houses was used in both of these periods. As the Tomaval occupation was the later, and as the large rectangular foundations are more common to the

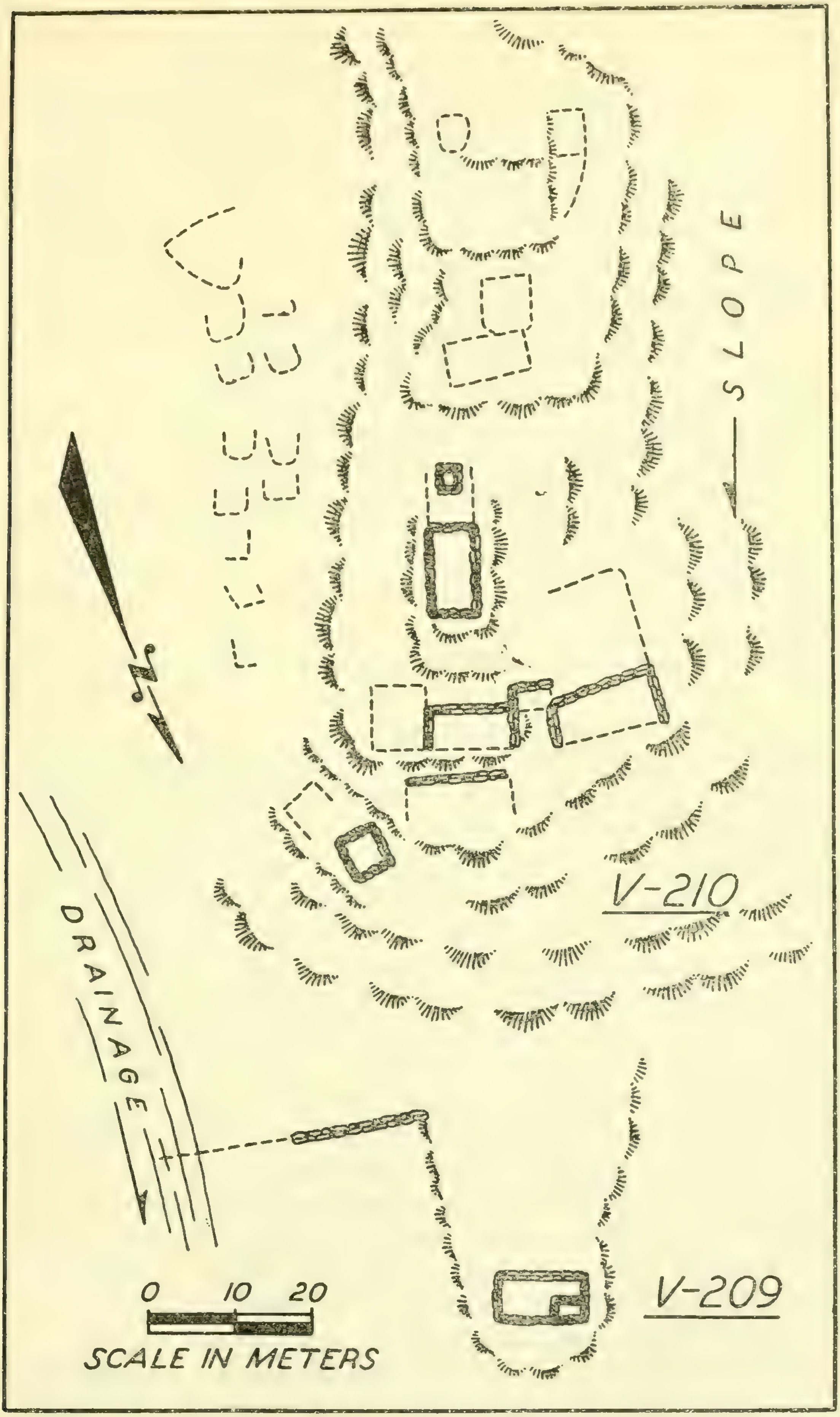
SLOPE
N
DRAINAGE
V-210
V-209
0 10 20
SCALE IN METERS

FIGURE 63.—Ground plan of sites V–209 and V–210. Located on terraced hill spur. Both show Early Puerto Moorin ceramic components; V–209 also has Huancaco and Tomaval pottery; and V–210 has Tomaval materials. The latter components probably date structures.

Tomaval Period than to the Puerto Moorin, the odds favor a Tomaval dating of what structural evidence we have recorded.

V–211.—This is an Irregular Agglutinated unit of rock-walled rooms located at the head of a small ravine about two-thirds of the way up the slope of the hills bordering Huacapongo on the south (Quad E–2, northeast). Site V–210 lies down slope some distance to the north. V–211 is built upon a small natural terrace which has been dressed and expanded. This terrace platform is about 30 meters in diameter. From the outer edge of the terrace there is a straight drop down the steep, rough slope of the ravine. The approach to the site is by a narrow trail leading up the crest of a spur.

Eight definite rooms can be made out on the terrace, and there are a few scattered rooms on small, shelving house terraces just above the main one. The largest complete room foundation in the main group is 8 by 7 meters, although some of the partially destroyed rooms may have been a little larger than this. There are some smaller rooms, but no binlike compartments. Rooms are conjoined but not evenly alined, nor is there any discernible pattern arrangement to the group.

Masonry is double-faced with smooth wall surfaces resulting from the use of angular-fractured rock and careful spalling. Walls in some places still stand over 1 meter high.

The collection from this site shows over 200 Tomaval sherds, rated as excellent, and a small number of Early Puerto Moorin fragments. There is little doubt that this is a Tomaval Period house group.

V–213.—This is an Irregular Agglutinated terrace house group, now marked by the platforms and stone-walled foundations, which is located on the crest of a sloping hill spur in Huacapongo-South (Quad E–2, northeast). It is directly down slope from V–211. The site is arranged in stair-step fashion with one room or platform terraced above the one below it (fig. 64). Gaps between rooms are necessitated, in some places, by the slope of the terrace face between them; in other cases rooms are contiguous from terrace to terrace. Most of the rooms are moderately large, 9 by 4 meters to 6.5 by 3.5 meters being a representative range. In some instances the maximum dimension is placed cross-crest; in others it runs parallel to the crest. There are some smaller rooms, usually as adjuncts to the larger ones or as divisions within them. All in all, there are 12 to 13 rooms or platforms. It may be that there were actually more rooms than this as some of the platforms may have supported several rooms.

This is a difficult site to date. The collections show over 300 Early Puerto Moorin sherds (rating: excellent) as opposed to 50 sherds of the Tomaval Period (rating: average). The rooms, similar in size

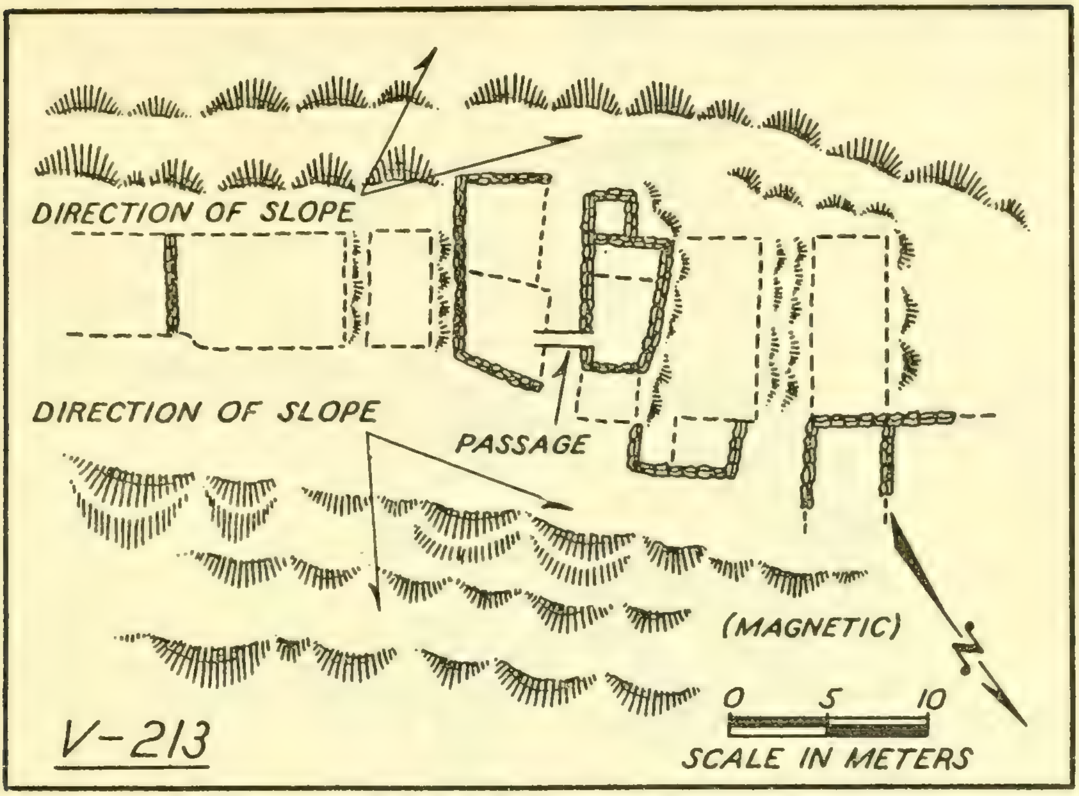

FIGURE 64.—V–213 ground plan. Hill spur location. Questionable dating as both Puerto Moorin and Tomaval are represented, but latter probably dates structures.

and shape to others of the Tomaval and post-Puerto Moorin Periods, suggest the Tomaval dating for the visible structures.

V–214.—This site is located on another sloping spur or ridge on the face of the hills of Huacapongo-South (Quad E–2, northeast). It is similar in type to V–213 and lies about 350 meters to the west of it. There is another spur between V–214 and V–213 which is capped by an unnumbered and unsurveyed site.

The house platforms and stone room foundations of V–214 are arranged terracelike, one above the other (fig. 65). The buildings are not quite contiguous as a small gap is usually left from terrace to terrace. As in V–213, the rooms or walled terraces are rectangular. They range from 12 by 6.5 to 3 by 3 meters. Most of the larger rooms are placed with their maximum dimension running across the crest. Several raised platforms or banquettes were noted. In two cases these platforms or banquettes were split by deep, narrow little passageways. In one large room there were several small rooms or cubicle divisions.

The ceramic situation here is also comparable to V–213. A relatively few sherds date as Tomaval (rating: average) while over 100 are placed as Early Puerto Moorin. By analogy with V–213, and with other sites, I interpret the buildings as Tomaval Period.

In the quebrada down over the edge of the crest to the east of V–214, there are a series of house foundations of rock. I sketched some of

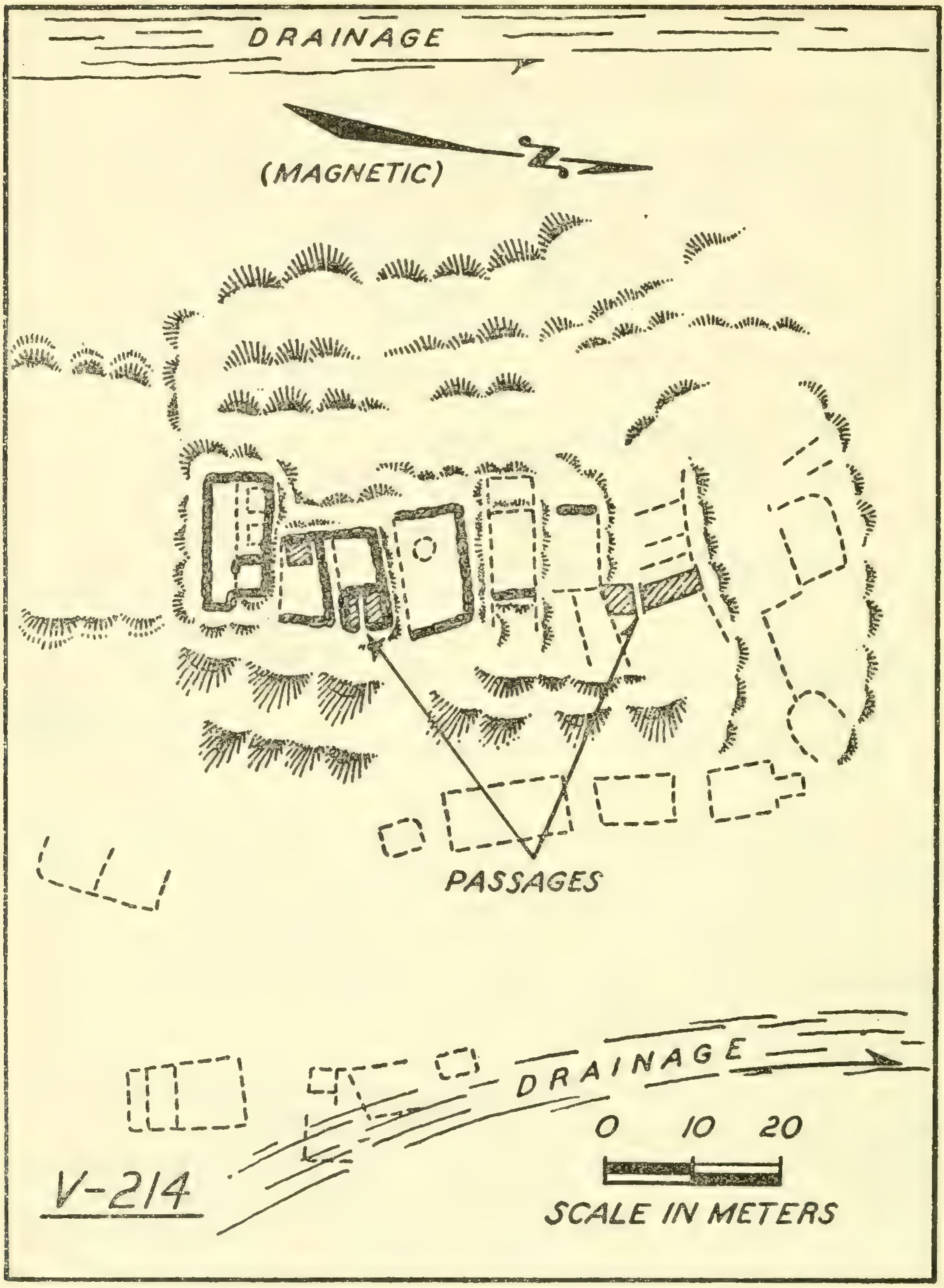
DRAINAGE
(MAGNETIC)
PASSAGES
DRAINAGE
0 10 20
SCALE IN METERS
V-214

FIGURE 65.—V-214 ground plan. Hill spur location. Both Puerto Moorin and Tomaval ceramics at site, but latter component probably dates structures.

these, but we did not examine them closely nor did we collect pottery from them.

V-223.—This site lies in Huacapongo-North (Quad F-2, northeast) on a ridge or spur which descends from the hills. V-224, a site of unknown date, is just below V-223 on the floor of a little quebrada (fig. 66).

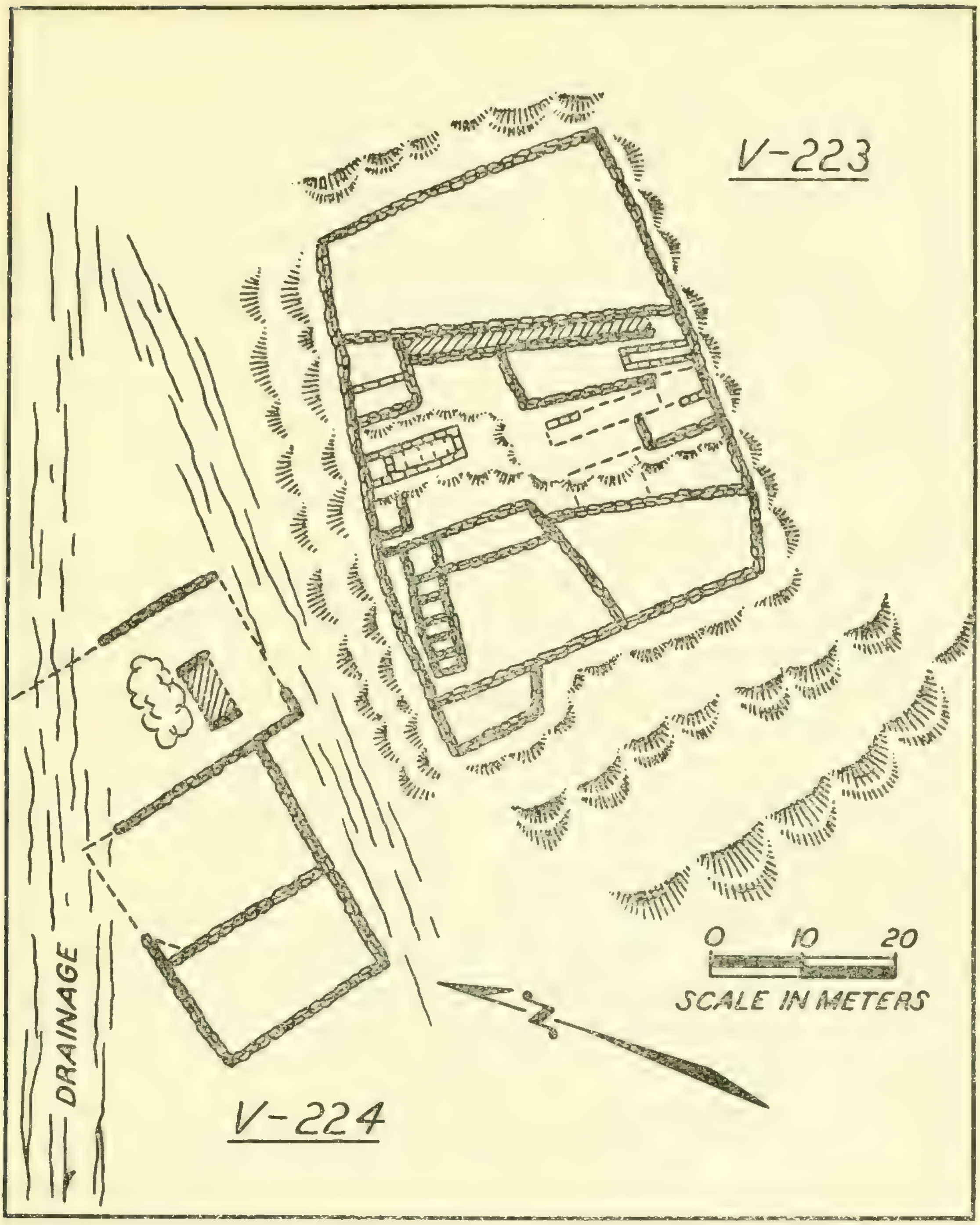

FIGURE 66.—Ground plans of V–223 and V–224. Former on hill slope and latter on quebrada bottom. V–223 dates as Tomaval; V–224 not dated.

V–223 is a Rectangular Enclosure Compound, measuring 52 by 38 meters. The outer wall is of stone, double-faced and about 80 cms. wide. Within the rectangle, the room divisions are not well squared but set more on a diagonal. This is conditioned by the natural terracing of the hill and with the partitioning walls following these terraces. Most of the interior walls are of stone, but there are places where adobes are superimposed upon the stone. These adobes are rectangular, plain, and mold-made. They measure 28 by 15 by 15 cms.

In the upper part of the rectangle there is a large room or court which runs the full width of the enclosure (38 meters) but varies from 20 to 10 meters in the other dimension. On the next lower terrace are smaller rooms, and there is a long banquette which extends through two separate rooms. Descending another terrace level, we come upon a series of six small, cubiclelike rooms constructed of the brick-shaped adobes. Below this there are two large quadrilateral, but not parallel-sided, rooms. In one of these there is another series of six small cubicles or bins (averaging about 2 meters square), this time constructed with stone walls. At the lowermost corner of the rectangular enclosure there is a single room, 5 by 10 meters in extent, attached to the outside of the wall.

Our collection from this site includes over 150 Tomaval and nearly 200 Early Puerto Moorin sherds. The site plan suggests Tomaval rather than Puerto Moorin.

V–228.—This terrace house group in Huacapongo-North (Quad F–2, northwest) has been described under the Huancaco Period (pp. 198–200). There are, however, some house platforms or terraces which are below, or to the west of, the main group (fig. 43). These may have been sites for houses of the Tomaval Period as Tomaval pottery, mixed with earlier Puerto Moorin wares, was found on these terraces.

V–255.—This is a structure and cemetery site near the river delta in Lower Virú-North (Quad B–5, northwest). Dunes surround the site and the ocean is only 1 kilometer distant.

A knoll, probably a natural dune, about 3 meters high and 75 by 40 meters in extent, is faced along one side by a tapia adobe wall. Open graves, pottery, and human bones dot the surface of the knoll. Brick-shaped adobes were, apparently, used as grave linings, and these are found by the sides of the looted graves.

Adjacent to the cemetery knoll and the wall, on the side facing the sea, there is an old pattern of curving, interlocked cultivation plots. These plots could be traced for 200 meters or so to the south of the cemetery. On the aerial photographs of the region these ancient irrigation projects are revealed as light-colored blotches. This coloration results from the sediments which these canals and plots once contained and which, on the ground, appear as a thin, caked crust of clay or mud. The air photos show that the plots noted at V–255 were a part of a much greater cultivation layout, extending for a kilometer or more parallel to the beach.

Two hundred meters to the southeast of the V–255 cemetery knoll is a Semi-isolated Large House. The walls are massive and the lower parts are built in sections of tapia adobe. Upper portions of the walls, now mostly fallen, are of plain, mold-made, rectangular adobes (37 by 20 by 14 cms.). The house is a simple rectangle, 12 by 10 meters.

There is one small interior corner room, 3 by 3 meters, with a raised or platform floor.

The surface sherd collection from V–255, gathered from the cemetery and the cultivation plots, dates as Tomaval and La Plata with averge ratings.

V–256.—This site is also in the dunes of Lower Virú-North (Quad B–5, northwest), 400 meters southeast of the V–255 cemetery knoll. V–256 is also a cemetery and midden area. Graves and refuse were found on three low sand dunes which total 200 by 25 meters in area.

Southwest of the cemetery and midden area there is a tapia-walled Semi-isolated Large House, 15 by 8 meters (pl. 40, *top*). It has two rooms: one 10 and one 5 meters long. There is a doorway at the end of the larger room. Walls now stand 50 cms. high and measure 75 cms. thick at the base.

The collections from V–256 were made from the midden and cemetery area. A collection of sherds from the western end of the site has a date range from La Plata through Estero. The second collection comes from the east end of the site and dates as Tomaval. Ford's rating of these collections, as reliable, is average and excellent, respectively.

V–312.—This is a rock shelter in the hills to the north and the east of the Hacienda San Ildefonso (Quad D–2, northeast). It was explored by Junius Bird, and I am indebted to him for the information concerning it.

Bird describes stone-walled structures built within a rock shelter in the cliffs. These structures were irregularly agglutinated conjoined rooms averaging about 5.5 by 2.5 meters in size. The mud mortar and chinking of the masonry were well preserved. In some cases the walls reached to the natural overhanging roof of the shelter, and it is possible that all rooms were so constructed originally. Burials had been made in the floor of one room.

The dating on this site is based upon observations by Bird and upon a small collection of sherds which Bird turned over to Ford for examination. The site falls somewhere in the Tomaval-La Plata time range.

Additional occupation sites.—There are 15 sites which have ceramic components referable to the Tomaval Period but upon which no structures can be reasonably associated with this period. These are:

V–13
V–20
V–21
V–64
V–65
V–69
V–119
V–124
V–144
V–173
V–253
V–264
V–286
V–301
V–305

There are five midden areas in various parts of the valley which date only from the Tomaval Period. None of these show any structures whatsoever. V–65 (Quad E–3, northwest) is in the sandy plain which borders the cultivated area of Middle Virú-South. It is marked by sherds, crushed shell, rock fragments, and grey midden. Its extent is about 200 by 100 meters. V–69 (Quad E–2, southwest), also in the sandy margin of the Valley bottom in Middle Virú-South, is on two small hills, an area of sherds, shell, and midden 75 meters in diameter. V–173 (Quad C–4, southeast) is in the zone of dense *monte* near the river in Lower Virú-South . We first saw this site when traveling on a small side road which cut into one side of it. It is likely that there are others of the same type hidden by the *monte.* Shell, sherds, and miscellaneous debris occupied an area about 50 meters in diameter. V–264 (Quad B–4, northwest) is one of the numerous large middens in the dunes of Lower Virú-North. A thin covering of midden, shell, and potsherds were found for several hundred meters. V–301 (Quad B–5, northwest) is a refuse mound in Lower Virú-North near the river delta. Collier excavated here and reports the site to be 25 by 15 meters in extent and 2 meters deep.

For all of the above, except V–301, I am indebted to Ford for datings of surface collections which he rates as either average or excellent. Collier dated V–301 on the basis of his excavations.

Site V–124, an adobe-walled compound which I have placed as Estero Period, also shows some Tomaval Period pottery and may, possibly, have been largely constructed in the earlier period. In either case, it is certainly a Tomaval refuse station and is so listed.

Sites V–119, V–253, and V–305 are all middens and all show only late occupations, at least to judge from their surface pottery. V–119 (Quad C–6, northwest) is an extensive refuse area in the beach country of Lower Virú-South. No collection was made here, but I hazard a date of Tomaval-La Plata-Estero on the basis of my observations of surface sherds. V–253 (Quad B–4, northwest) is in the dune region of Lower Virú-North and is a thin shell midden and cemetery area which stretches coastwise for 500 by 100 meters. I dated this site as Tomaval-La Plata-Estero on the basis of casual observations of surface material (see also cemeteries of these periods, pp. 319, 331–332). V–305 (Quad B–5, northwest) is a midden on a dune in Lower Virú-North not far from the river delta. Area of the refuse is approximately 50 by 30 meters. Collier's excavations here proved the rubbish to be 1.5 meters deep and to date from the Tomaval and La Plata Periods.

V–64 (Quad E–3, southwest) is a midden in Middle Virú-South which extends for about a kilometer along the sandy border of the Valley bottom. It was occupied in Puerto Moorin times (p. 79) and used as a cemetery during the Huancaco Period (p. 231). Additional occupation for Tomaval is indicated by a collection of over 400 sherds which Ford rates as excellent.

V–13 (Quad D–2, southeast) is a combination of a cemetery, midden, and dwelling construction site. It dates as of several periods, and satisfactory assignments of features and periods have not been worked out. Tomaval is represented by a few sherds. V–20 (Quad E–1, southeast) is a large rock-walled quadrangle, probably built during the Huancaco Period (see p. 223). The Tomaval sherds are incidental. V–21 (Quad E–1, southeast) is a dwelling group on the slopes of Huacapongo-North. Most of the houses were probably built during the Puerto Moorin Period, although the Tomaval refuse at the site may correlate with some building. V–144 (Quad E–1, southeast) is a Puerto Moorin dwelling group which has been re-used, for occupation or burials, by Tomaval and La Plata populations.

V–286 is a series of irrigation basins or *pukios* in Lower Virú-North (Quad B–4, northwest) (pl. 54, *bottom*). A very few sherds picked up on them indicate a date of anywhere in the last three prehistoric periods or even from post-conquest times.

DWELLING-CONSTRUCTION MOUNDS

Explanatory note.—The term "Dwelling-Construction Mound" has reference to sites or mounds resulting from accretional building of adobe dwellings combined with refuse deposition. Such sites are found in the lower and middle Valley. Most of those which we surveyed appear to have been constructed in the Gallinazo Period. It was noted that their building and use declined during the Huancaco Period, and this decline continues during the Tomaval occupation of the Valley. Only seven Dwelling-Construction Mounds were recorded for this period, and all of these also date from Gallinazo times. It may be that the Tomaval people used the old Gallinazo Dwelling-Construction Mounds principally as places of burial. In several sites it is difficult to find evidence of Tomaval use other than burials; however, there are one or two instances where there is living refuse of the Tomaval Period.

Tomaval Dwelling-Construction Mounds are:

V–154
V–162
V–235
V–238
V–258
V–259
V–310

V–154.—This site has been described with the Gallinazo sites (pp. 122–123). It is a small mound in Lower Virú-North (Quad B–4, northwest). Tomaval Period use, as reported by Bennett, consists of a few centimeters of superficial refuse.

V–162 (*Huaca de la Cruz*).—This famous site in Middle Virú-South (Quad D–3, southwest) is built on a dune. Most of the construction dates from the Gallinazo and Huancaco Periods (see pp. 123–124, 203). We know, also, that it was used as a cemetery during Tomaval and La Plata times (Bennett, 1939, pp. 39 ff., p. 50).

V–235 (*Taitacantin*).—This dwelling-construction is on one of the biggest dunes in Middle Virú-South (Quads D–3, southwest, and D–4, northwest). It was described for the Gallinazo Period (p. 125). Tomaval peoples used it as a cemetery and may have lived there as well.

V–238 (*Huaca Larga*).—This is the largest dune hill in the Valley (Quad D–4) (see pp. 125–126). There was a Gallinazo Dwelling-Construction Mound on it, but Kroeber (1930, pp. 79–80) speaks of Tomaval (Coast Tiahuanaco or Epigonal) graves. It may also have been a Tomaval living site.

V–258.—This is Bennett's "Ca–5" (Bennett, 1939, pp. 76–77) (Quad B–4, southwest). It is on the edge of the Gallinazo Group of sites. The mound was built in Gallinazo times (see pp. 127–128), but Bennett reports Huancaco, Tomaval, and La Plata materials as well. It has not been determined if these came from graves or from occupational refuse.

V–259.—This is Bennett's "Ca–4" (Bennett, 1939, p. 76) (Quad B–5, northwest). Is is a Gallinazo Dwelling Construction Mound (p. 128) with Huancaco and Tomaval occupation, burials, or both.

V–310.—(Quad C–4, northeast.) This is a Gallinazo or Huancaco Dwelling-Construction pile with Tomaval Period burials (see p. 131).

PYRAMID-DWELLING-CONSTRUCTION COMPLEXES

The Pyramid-Dwelling-Construction Complexes, as these were defined for the Gallinazo and Huancaco Periods, were relatively compact, structurally continuous masses of dwellings, buildings, platforms, and pyramidal mounds. The V–59 (pp. 132 ff.) and V–88–89 (pp. 205 ff.) sites are outstanding examples. We do not have their counterparts in the Tomaval Period, or, at least, they were not constructed in the Tomaval Period. There is one example, V–152–153 (Tres Huacas (Quad B–4, northwest), which shows Tomaval occupation or use but which was clearly built during Gallinazo (see pp. 140 ff).

PYRAMID MOUNDS

Explanatory note.—There are 13 sites, dating wholly or in part from the Tomaval Period, which are artificially and purposefully constructed Pyramid Mounds. Five of these have been discussed under previous period headings as "Pyramid Mounds" or "Isolated Pyramid Mounds." The remaining eight date only from the Tomaval or later periods, or, at least, they date this way from our surface pottery collections. Four of them (V–106, V–298, V–299, V–300) might be classed as "Isolated Pyramid Mounds," although the latter three are found within a radius of 300 meters. The other four are not "Isolated Pyramid Mounds" as we have defined this term for the Gallinazo or Huancaco Periods. One site (V–134) is a cluster of four small mounds which appear to be related as a site unit. Two others (V–37 and V–148) are each a part of a larger complex of defense walls, canals, and dwellings. They are not, from an architectural or structural standpoint, analogous to the "Pyramid-Dwelling-Construction Complexes" of the Gallinazo or Huancaco Periods, although they have served some of the same functions. V–182 is also somewhat similar to the Pyramid-Dwelling-Construction Complexes, although it is substantially smaller. It may also have parallels in certain Tomaval dwelling sites which incorporate a small platform or mound within the walls.

Pure sites		*Mixed sites*	
V–37	V–298	V–95	V–185
V–134	V–299	V–106	V–198
V–148	V–300	V–167	V–200
V–182			

V–37 (Huaca de la Guerra).—V–37 is a mound made imposing by its situation on the edge of the rocky flood plain overlooking the cultivated Valley bottoms (pl. 35, *bottom*). It is in Huacapongo-North just off the main road which runs from Hacienda Tomaval to the village of Huacapongo (Quad F–2, northwest). Construction is of stone and earth, or so it appears from surface inspection. No adobes were noted anywhere about the mound, although it is possible that it has an adobe core as do many of the Virú rock-covered mounds.

The outermost basal measurements of the mound are 45 meters square. From this outer edge (fig. 53) it rises rather gradually to a rectangular flat summit which is set just a little south and west of mound center. The summit is 21.5 by 20 meters, 4 meters high, and is inclosed with a 1-meter wide stone wall. This wall is now no more than a foundation. It may have been simply a retainer for mound fill, or it may be the remains of a building.

On the flanks of the mound there are some evidences of terracing. These are stone retaining walls, most clearly seen on the north and east sides. On the west side, it is possible that there were once small rooms constructed on a terrace, although I am not certain of this. At the northeast corner of the mound foot there is a foundation of a room or small enclosure, and a wall extends from this in a northeasterly direction toward the wall complex and dwelling sites of V–140 (pp. 305–306) and V–147 (pp. 248–250). As can be seen from the maps (fig. 53), this wall extension does not aline perfectly with one of the walls of V–140, but it is possible that they were once joined. Such a connection, if it existed, has been broken by the modern road.

Two collections, each numbering over 200 potsherds, were made from all parts of the mound surface and the immediate environs. Both date as Tomaval Period with ratings of excellent and average.

V–134 (*Cerro del Piño Mound Group*).—The Cerro del Piño Mound Group lies in a small natural embrasure on the northwest side of the Cerro del Piño, Lower Virú-South (Quad C–4, southwest).

The site does not show to advantage on the air photos owing to semidense *monte* cover, but inspection on the ground reveals the mounds to be well shaped and preserved. There are four mounds, and the total area of the mound group is about 220 by 80 meters. The highest is Mound 1, which stands about 3 meters above the surrounding ground. The other three mounds are appreciably lower than this. Although disposed along a north-south line (fig. 67), the individual mounds are oriented diagonally to the cardinal directions. All of the mounds are covered with loose rock, and were constructed of rock, earth, and, in some places, adobes.

Mound 1 is of irregular shape with outer limits of approximately 50 by 27 meters. The sides slope upward gradually to a rectangular, flat summit which is outlined by a stone wall. This summit is 22 by 14.5 meters. The foundations of the wall which outline it are 1 meter wide and constructed of waterworn boulders set in mud in a double-face technique. There were partition walls on the summit, too, as though it had once sustained a building, or buildings, of, perhaps, three rooms. Terracings are only vaguely suggested on the mound slope, but along the northeast face there is a low, apronlike platform. This platform is less than 1 meter in elevation, and there is a suggestion that it was originally constructed in two parallel arms or low embankments with a lower area in the middle. Outlines of stone wall foundations add to this interpretation. There is, though, an additional feature which does not fit so clearly. This is a stone wall which starts out on the westernmost of the two embankments, at mound base, and strikes northward. Presumably it joins up with another wall on the slope, or apronlike flank, of Mound 3.

Mound 2, west-northwest of Mound 1, is more or less circular in shape with a diameter of 12 meters and a height of about 1 meter. It may have served as a base for a rectangular stone-walled house, 5 by 6 meters. An old excavation in the summit revealed some adobes, but their shape was not determinable.

Mound 3 is covered by *monte* in its upper portions. It is 65 meters north of Mound 1, and, as observed, may have been related to it by a connecting wall. As near as I could determine, Mound 3 is of oval

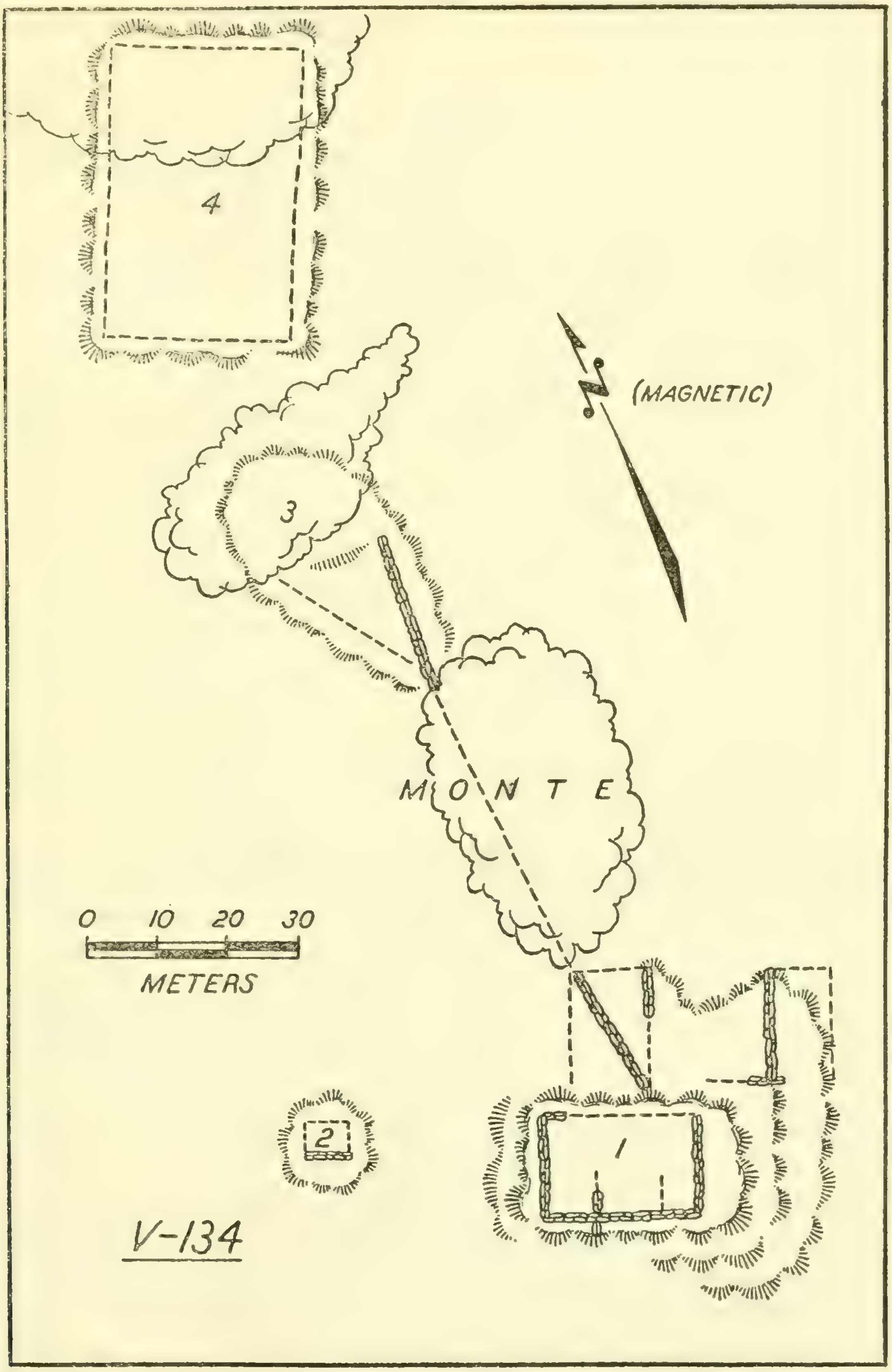
4
3
(MAGNETIC)
N
MONTE
0 10 20 30
METERS
2
1
V-134

FIGURE 67.—Ground plan of V-134. Group of earth, adobe, and rock mounds. Dates as Tomaval Period.

form with a long slope leading down to the south. This slope seems to have been outlined on two sides, triangularwise, by stone walls, one of which connects with the wall from Mound 1. The summit is between 1 and 2 meters high. This mound has less surface rock than the others.

Mound 4 is 10 meters north of Mound 3. It is a rectangular, steep-sided platform. Dimensions of the mound are 45 by 33 meters, from toe to toe. Its summit may have been outlined with a stone wall, and there may have been rooms or buildings on the mound.

A collection of over 100 sherds was gathered from the mounds and the areas between them. This collection is dated as Tomaval with an excellent validity rating.

V–148 (*Huaca La Gallina*).—The Huaca La Gallina mound is on the outwash plain of Huacapongo-North (Quad F–2, northwest). The mound itself is a rock-covered flat-topped pyramid, rectangular in shape. It is associated and connected with a complex system of rock walls which form a series of large enclosures in this part of Huacapongo. This system of walls and its association with a mound, or mounds, is reminiscent of the walls which are found as a part of the V–37, V–140, and V–147 (see pp. 248–250) complex. This latter group is also located on the outwash plain not far to the west. The distance between V–147 and V–148 is just short of 400 meters, and it is possible that V–148 (as well as V–149) was once a part of a larger community plan which has been cut in two by flooding. There are, however, differences in ceramic dating which do not fully accord with this interpretation.

The V–148 mound has outer measurements of 57 by 38 meters (fig. 45). There are two principal levels. The southern level is approximately 3 meters high and the northern about 2 meters. These two levels, which divide the mound almost in half across its long axis, are separated by a deep gully, as though the two platforms had been built up separately and touched only toe-to-toe. In the northeast corner of the north level there is a raised section, 22 by 10 meters.

The entire mound summit, of both levels, has been dug over by *huaqueros* so that it is impossible to trace any foundation walls on the mound. The grave digging has, however, revealed a number of circular, rock-lined cists on the mound top. They are 1 meter deep, on the average, and there is little doubt that they were graves as pottery and human bone fragments are found around them. Mound fill, as exposed by these old grave cuts, appears to have been largely boulders and earth. No adobes were seen.

The wall complex around V–148 has two types of walls. One type is from 1 to 2 meters wide, double-faced, and with an ample rubble core fill. The other, sometimes found superimposed upon the first type, is narrower (50 to 70 cms. wide) and less well made. The narrower type of wall is seen in the partially formed rectangle at the southwest corner of the V–148 mound and in the wall which extends from this rectangle westward (marked: "Superimposed Wall").

Of the more massive walls, there is first the wall which apparently parallels the upper canal. This is at the foot of the hills. There are other wall sections below this which run in a general east-west direction. One of these connects with the principal north-south wall and also makes a sharp right-angle turn down to the V–148 mound. Together, these walls make a semienclosure for the mound. At the southern boundary of the site area there is another wall which runs from the drainage ravine on the east to a small, low, rectangular rock mound (unsurveyed). From this small mound it continues on to the west until it is broken by another drainage. Between this southernmost wall and those along the northern or upper part of the site there are some other walls, one of which bisects the site area from east to west, forming a great enclosure in conjunction with the southern wall and the major north-south wall. At the eastern end of this great enclosure there are smaller enclosures formed by still more walls. One of these smaller enclosures may be entered by a gateway which passes through the main southern wall.

At the easternmost end of the site, in connection with some minor walls, is another small, low, rectangular earth-rock mound (unsurveyed).

Canal courses are not easily seen in the V–148 area. Even the major upper canal does not show up well, although it is certain that it must have paralleled the northernmost wall as it followed the base of the hills. Below this, just above the V–148 mound, is what may be an old canal bed. Possibly, this was a distributary out of the upper canal.

There are also roads and paths, and these are more easily followed. Some may be of prehistoric origin, particularly the wider road. I am less certain about the smaller paths.

Up near the northeast corner of the site area, just south of the northern or canal wall, and possibly once enclosed within a walled, rectangular zone, are some circular stone foundations, now reduced to ground level. The two which are the best preserved are 4.5 and 7 meters in diameter, respectively. Both have thick, well-built, double-faced walls, and both have interior circles or central chambers similarly well constructed. What may be a third lies off to the southeast of these. It is a partial circle with a diameter estimated at about 7 meters. Within it is a small (3.5 by 2.5), low earth-rock platform.

The dating on V–148 is extremely poor. Although we covered the site on two different occasions, we were unable to secure an adequate number of potsherds. Most of those we did obtain came from the summit of the mound proper, and probably refer to the looted graves which we have described. Ford dates this collection of 45 sherds as Tomaval, and their validity is rated as poor.

V–182.—In upper Huacapongo-North there is a small mound and building complex located on the edge of a bluff or old terrace overlooking the Valley floor (Quad F–2, northeast). The entire site is raised a meter or so above the surrounding surface of the bluff. This elevation may be partly or wholly artificial. A carefully laid out rock-walled, rectangular enclosure crowns the eminence. This enclosure is 24 by 21 meters (fig. 68).

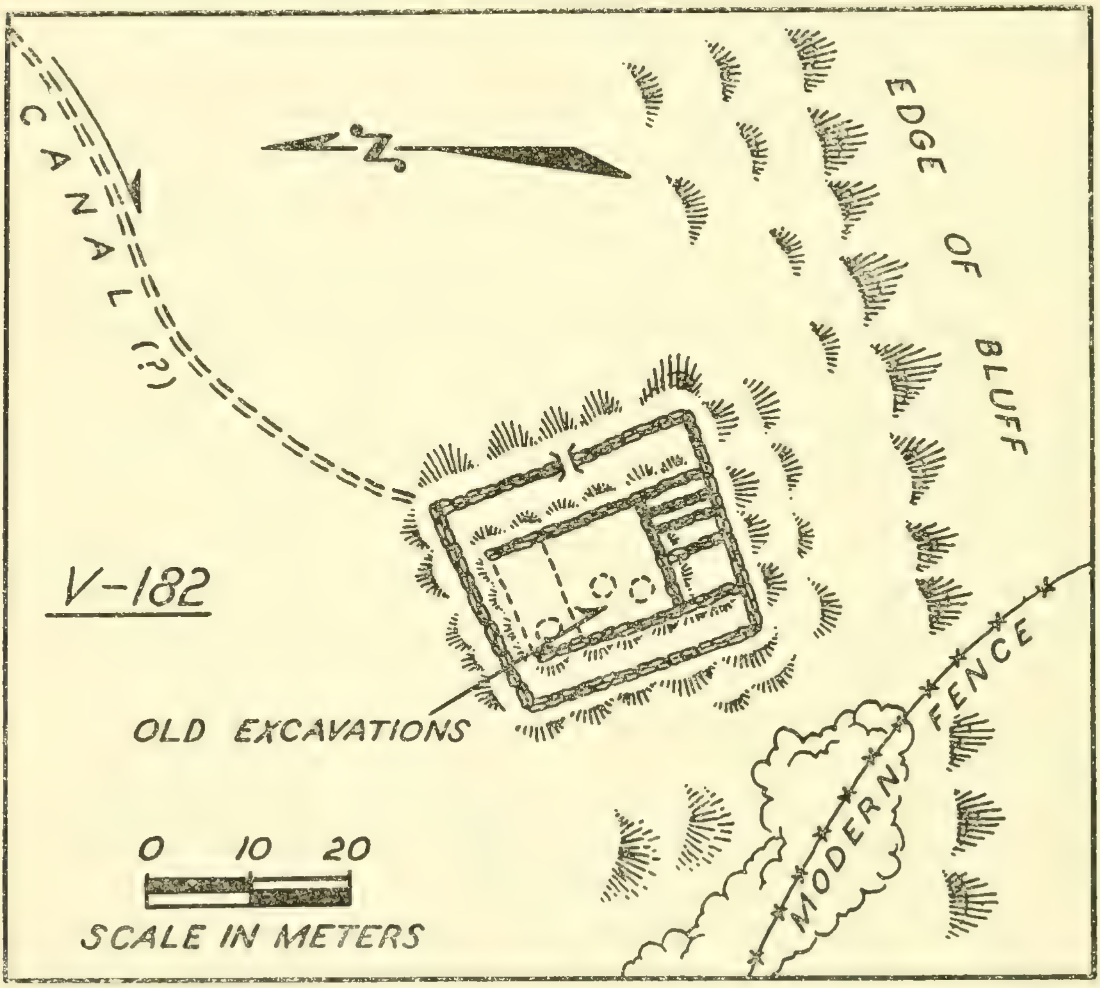

Figure 68.—Ground plan of V–182. Rock-covered mound within rock-walled compound.

In what is more or less the center of this enclosure is a rectangular mound, an additional 2 meters high, probably made of earth and rock. This mound is also walled on its four sides with a stone wall, and the mound's dimensions are 14.5 by 11 meters with the longer dimension corresponding to the longer dimension of the outer enclosure. The mound is flat-topped, and there are some old excavations in its summit, although I saw no evidence of successful grave digging.

There is inconclusive evidence for two room foundations on the mound summit. These rooms, if they were present, would have corresponded to the full size of the summit.

Between the mound and the outer enclosure there is a space varying from 6 to 3 meters wide. Only on the south side of the mound has this space or corridor been subdivided into rooms. This is the side where the corridor is the widest, so the rooms all measure 6 meters on one dimension and vary between 2 and 4.5 meters on the other.

On the gravelly slope next to the structure, principally to the north and east, there is an old area of cultivation. This area is characterized by narrow, shallow furrows, placed parallel at 1 to 0.5 meters apart, running north-south or up-and-down slope. It is possible that these patterns are the result of relatively recent agriculture; yet it is noted that they were once fed by the major canal system which runs along the north side of Huacapongo next to the hills. Distributaries coming out of this canal led into the cultivation plots. Faint evidences of one such narrow canal continue across the cultivation plots and terminate at the northeast corner of the site V–182 enclosure.

A collection of over 100 sherds from here dates as Tomaval, and has an average rating.

V–298 (*San Francisco Mound No. 1*).—In Middle Virú-North, in a zone of recent cultivation which has been left idle for some years, are three large, flat-topped mounds (Quad D–3, northeast).[47] The largest and southwesternmost of these three is San Francisco Mound No. 1.[48]

Mound No. 1 is rectangular with over-all basal measurements of approximately 100 by 75 meters. The orientation of the longer axis is northeast-southwest. Height of the mound is 5.5 meters except for a small superimposed summit platform which rises 9 meters above the surrounding ground level. This summit platform is centered on the southwest margin of the mound top. It is relatively small as compared with the total mound area, being only 18 meters on a northeast-southwest axis and 26 meters on the northwest-southeast axis. A terrace, about 1 meter lower than the summit platform, lies along its northeast side. This terrace is 26 meters long, corresponding to that dimension of the platform, and 7.5 meters wide.

There are a few large rocks on the surface of the mound, and rock retaining walls are in evidence along the edges of the summit platform and on the flanks of the mound proper. Originally, the mound was probably faced with rock, perhaps in steep narrow terraces which are now obliterated. Shallow pits, 75 cms. deep, in the summit and at several points on the flanks, revealed only rock and clay fill.

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[47] Apparently, this is the group of four mounds listed by Bennett under the name of San Francisco (Bennett, 1939, p. 21). I noted only three mounds in my survey, but may have overlooked a fourth.

[48] The Peruvian Servicio Aerofotográfico air photos (Mosaic-Hoja 37) have given the name "Gallinazo" to a survey station placed on this mound. This is not to be confused with Gallinazo (V–59).

Pottery was scarce. From the mound top, summit platform, and flanks we picked up about 50 sherds. Ford dates these as Tomaval, and rates them as average.

V–299 (*San Francisco Mound No. 2*).—The second San Francisco mound is 350 meters northeast of No. 1 (Quad D–3, northeast). It has a base size of about 85 by 50 meters with the orientation of the long axis of the mound northwest-southeast. The maximum summit platform is centrally located and has an elevation of 6.8 meters above the plain. A northwestern apron is much lower, with an elevation of only 2 meters while the southeastern apron is 4 meters high.

The mound is covered with small rock and gravel. A few adobes were seen in old excavations. Some of these were rectangular but appeared to be hand-made. A few which I measured averaged 35 by 19 by 11 cms. They were packed tightly together in clay mortar and small rock rubble. Other adobes were rectanguloid but with one corner rounded. (This form may have been an exception as I observed only two of this type.) They were large, measuring 40 by 20 by 17 cms., and were marked with striations which ran diagonally to the squaring of the adobe.

In spite of considerable old miscellaneous digging we noted nothing that would indicate that grave-seekers had been successful.

A pottery collection of over 100 sherds from this mound dates as Tomaval, and has an excellent rating.

V–300 (*San Francisco Mound No. 3*).—This third mound of the group lies 60 meters southeast of V–299 (Quad D–3, northeast). It is square, measuring about 60 by 60 meters at the base. The orientation is diagonal to the cardinal directions of the compass. Height is between 6 and 7 meters. The summit is also square and flat with no aprons, lower levels, terraces, or ramps. The mound appears to be made of earth and clay. Possibly, there are adobes in the core, but we saw none exposed.

A collection of about 150 sherds is dated as Tomaval Period, average validity. A very few (13) Early Puerto Moorin sherds also turned up in this collection (see p. 89). Probabilities favor a Tomaval Period date for construction of the site.

V–95.—This earth mound is located in Quad C–3, northwest and has been discussed under the Puerto Moorin (p. 90) and Huancaco (p. 218) Periods. It may have been partially built, or used, during Tomaval times.

V–106 (*Huaca de La Plata*).—(See pp. 315–317 and 319–332 for description of this mound.)

V–167.—V–167 consists of two adobe mounds located in Quad C–4, northeast. These probably date from Gallinazo times (pp. 152–153), and Huancaco and Tomaval re-use is indicated.

V–185 (*Huacapongo Mound*).—This rock-covered mound (Quad F–2, northeast) was described under the Puerto Moorin Period (pp. 84–85). It may have been built in that period, or it may be a Tomaval Period construction.

V–198.—This is another earth-rock mound (Quad G–2, northwest). It has been described under the Puerto Moorin Period (pp. 86–87). Tomaval pottery from this site seemed to be concentrated around old grave excavations in the summit. This suggests re-use for burial in Tomaval times of a mound built during the Puerto Moorin Period.

V–200.—This is a very small earth-rock mound (Quad G–2, northwest). Casual examination of surface sherds, without gathering a study collection, indicated Puerto Moorin, Huancaco, and Tomaval components. The mound is described under the Puerto Moorin Period (pp. 87–88.)

EARTH-REFUSE MOUNDS

Explanatory note.—As for the previous periods, sites of this category appear to be small accumulations of earth and refuse. Surface indications for the following suggest that they are simple detritus and, possibly, *salitre* piles with no buildings.

V–236
V–244
V–287
V–291
V–292
V–302

V–236.—This refuse deposit (Quad D–4, northwest) on top of an old dune was described under the Puerto Moorin Period (p. 91). Huancaco and Tomaval sherds were also found at the site.

V–244.—This mound is in Lower Virú-North, in the vicinity of Hacienda Santa Elena (Quad C–3, southwest). It is a long (50 to 60 meters), somewhat rectangular mound of earth with a flat summit and a vague suggestion of squared corners; however, there was no structural or burial evidence on the site. A modern canal cuts along one side of the mound but exposes no adobes. We also made a small test hole in the shoulder of the mound. This revealed sherds, charcoal, and organically stained soil for a depth of 1 meter; but no structural features came to light.

There is a large, water-filled depression along one side of the mound (borrow pit?).

Our collection of almost 200 sherds dates as Tomaval, and is rated as excellent.

V–287 (*Potrero Cinco*).—This earth mound is described under the Huancaco Period (p. 222) (Quad B–4, northeast).

V–291 (*Carmelo Hacienda, Mound No. 1*).—This mound is described under the Huancaco Period (p. 222) (Quad B–5, northeast). It also has a La Plata ceramic component.

V–292 (*Carmelo Hacienda, Mound No. 2*).—This is a low mound of earth in Lower Virú-North, near Carmelo Hacienda (Quad B–5, northeast). It is one of Bennett's (1939) "Ca–3" sites. We noted no structural features of any sort. A collection from the surface was dated by Ford as Tomaval, and its rating is excellent.

V–302.—This mound, excavated by Collier, has been described under the Guañape Period (p. 54) (Quad C–4, northwest). Puerto Moorin, Gallinazo, and Huancaco refuse is also reported. Tomaval is represented by intrusive burials and, possibly, by refuse.

FORTIFIED SITES

Explanatory note.—Fortified sites dating from the Tomaval Period are not the enclosed Hilltop Redoubts of the Puerto Moorin Period or the complex castillos of Gallinazo and Huancaco times. The Tomaval sites are simply the prepared house platforms or terraces perched on the tops of high hill crests which border the Valley. Sites of this type date back as early as the Puerto Moorin Period; in fact, one such Puerto Moorin Period Hilltop Platform was re-used by the Tomaval people (V–212). The defensive nature of these house platforms and terraces lies essentially in their altitude and difficulty of ascent. Manmade fortifications, other than terrace walls, are not evident.

V–212.—This Hilltop Platform site in Huacapongo-South (Quad E–2, northeast) has been described under the Puerto Moorin Period (p. 99). It is a series of rectangular house foundations or platforms, about 15 in number, arranged step-fashion, one above the other, along the ridge. The pottery collections from this site are preponderantly Tomaval.

V–61.—V–61 is a Hilltop Agglutinated Village site placed on one of the highest hills bordering Queneto quebrada on the southwest (Quad D–2, northeast) (pl. 37, *top, left*). The site is very difficult of access. It was discovered by J. A. Ford who was the first of our group to visit the site. Later, Ford and Strong returned to V–61, and the latter prepared a sketch map of the ruins which he kindly turned over to me. A third visit was made to the site by Ford and myself at which time we made a few test excavations and added to Strong's map. The map which I offer (fig. 69) is largely a sketch, supplemented with a few chain measurements. No satisfactory epidiascopic projection could be made of V–61, and, in addition, the variations in elevation made mapping more difficult. The contour lines on my map are projected from the Peruvian Servicio Aerofotográfico's maps, and, in general, they check with the topography as observed at the site.

The topmost crest of V-61 is 330 meters above sea level which is about 200 meters above the Valley floor. The nuclear part of the site runs from this 330 meter elevation down the ridge to the south.

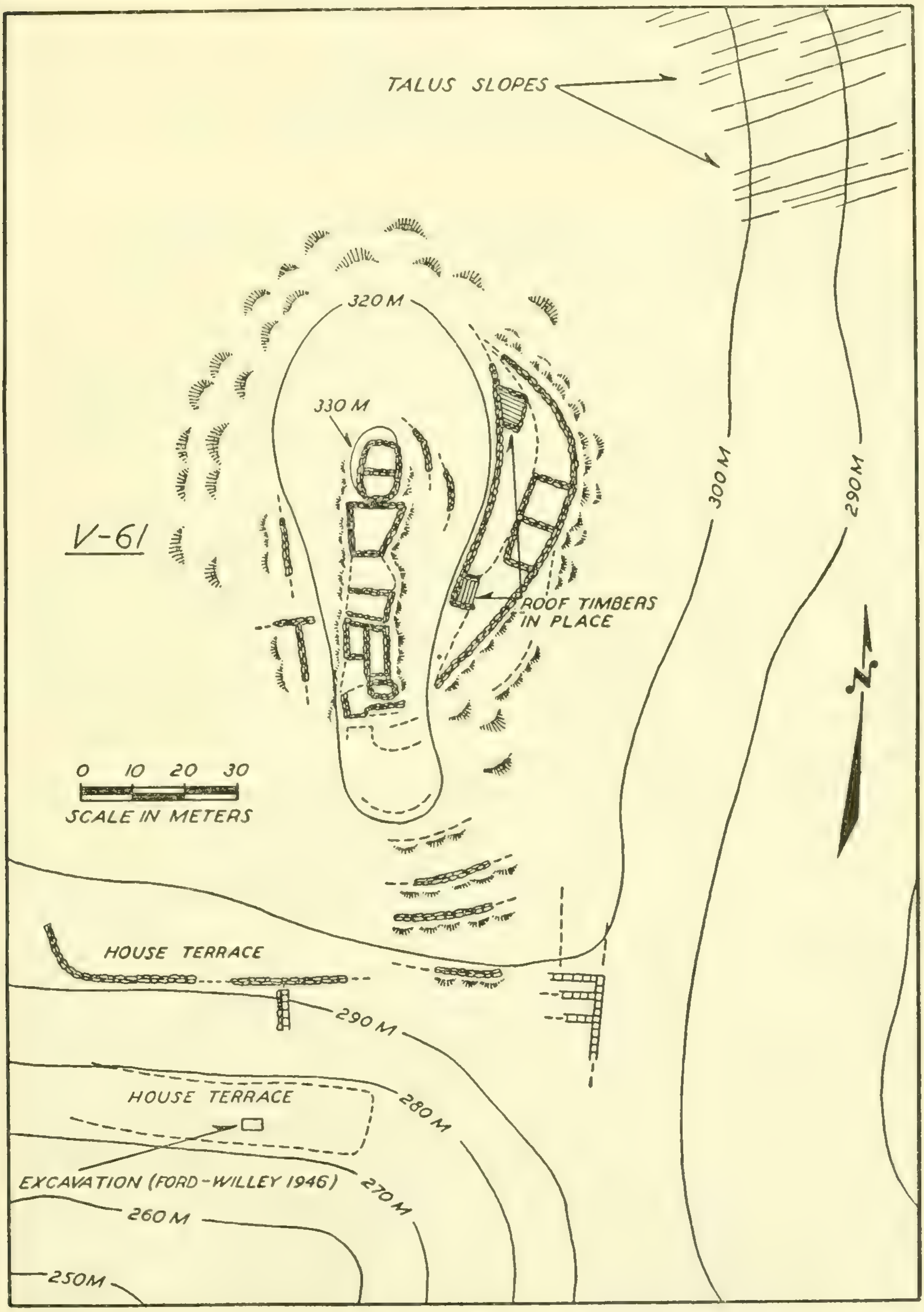
TALUS SLOPES
320 M
330 M
V-61
ROOF TIMBERS IN PLACE
300 M
290 M
N
0 10 20 30
SCALE IN METERS
HOUSE TERRACE
290 M
HOUSE TERRACE
280 M
EXCAVATION (FORD-WILLEY 1946)
270 M
260 M
250M

FIGURE 69.—Ground plan of V-61. Hilltop and terrace-slope house group Tomaval, La Plata, and Estero Periods all represented.

There are at least 11 rooms in this central arrangement. Most of them are conjoined but in step-terrace fashion. The largest room is 10 by 8 meters; the smallest, 3 by 2 meters.

These buildings on the crest are less well preserved than those on the terrace levels just below it. On the two terraces which lie to the east of the summit there are several small buildings of two or three rooms each. Some of them (see map, fig. 69) are almost intact (pl. 37, *top*, *right*), including the full height of the walls and roof timbers. The masonry is double-faced, and the angular stones used are placed to give flat wall surfaces. Small chips of stone were used for spalling.

Adobes were also found in these buildings, although this sort of building material is more common in the buildings farther down from the crest on the south side of the hill. These adobes are rectangular, mold-made, and plain, and the adobe masonry was chinked with stone spalls. For the most part, it looks as though upper portions of walls were made of adobe while foundations were of stone, although there is one wall section where one end was made of stone and the other end of adobes (pl. 37, *bottom*, *left*).

The houses which still show roof timbers display interesting architectural features. These include wall ledges of stone set in the stone masonry (pl. 37, *bottom*, *right*), small wall niches, and evidences of two stories. The preserved wooden beams or planks were of algarroba. One such roofed room was cleaned out by us (the southernmost, see fig. 69). It had stone walls on three sides and evidences of an adobe wall on the fourth. The roof was of rough-hewn algarroba planks covered with a layer of mud 8 cms. thick.

A small rectangular cist was noted in one stone wall (either a house or terrace retaining wall). It was 80 by 50 cms. and 50 cms. deep.

The total area of V–61 is approximately 150 by 100 meters. This was not solidly covered with structures, but 50 to 75 rooms seems a conservative estimate.

Ford's excavation was made in the rubbish of one of the lower house terraces on the south side of the crest. It was a pit 3.5 by 2.5 meters carried down to a depth of 2.5 meters. The pit went through rubbish thick with sherds down to the natural rock of the hill. Over 3,000 sherds were taken from the pit by arbitrary levels. Ford (1949, p. 47) has commented upon this excavation, saying that it corresponds in ceramic chronology to Cut A at site V–171. An examination of Ford's chart (fig. 4 of his report) shows Cut A, V–171, to run the gamut from Tomaval through Estero Periods. On this basis, the V–61 site is dated Tomaval-La Plata-Estero for its total occupational history. The contents of the room which we cleaned out totaled more than 300 sherds. Ford has placed this smaller collection as of the Tomaval Period only.

CEMETERIES

Explanatory note.—Cemeteries for Tomaval are as common as they are for the preceding Huancaco Period. In most cases they are mixed sites with burials of later or earlier periods, but there are four pure Tomaval Period cemeteries:

V–125
V–154
V–159
V–217

The 16 Tomaval cemeteries that are mixed with the living remains or burials of other periods are:

V–51
V–66
V–70
V–71
V–96
V–104
V–106
V–120
V–122
V–129
V–135
V–146
V–218
V–253
V–255
V–256

V–125—Located in Quad B–5, northwest. This is a cemetery area in the grassy dune country of Lower Virú-North. Looted graves are seen within a radius of 100 meters. A collection of over 300 sherds, from old grave excavations, dates as Tomaval, but has a poor rating.

V–142.—This cemetery is in Huacapongo-North (Quad F–2, northwest). It was excavated by me during the 1946 survey, and a series of 12 graves and their contents have been described previously (Willey, 1947). The graves were discovered on the boulder-strewn alluvial fan on the north side of Huacapongo within a radius of 40 meters. The site group of V–140 and V–147 lies 300 meters to the northwest while the V–148 and V–149 mounds are approximately the same distance to the northeast.

All of the graves were simple inhumations made in the rocky soil without special lining or covering. They ranged in depth from 0.5 to 2 meters and were 1 meter or less in diameter.

Twenty-eight pottery vessels were recovered in all. They fit, typologically, into what Bennett (1939, pp. 140–142, 146–147) has called the "Middle Moche II, Subperiod C." This division is characterized by the Black-white-red Geometric style, blackware, and pressed decoration. Ford has correlated decorated and funerary pottery of this sort with the Tomaval Period (Ford, 1949, p. 68).

V–159.—This cemetery is in Lower Virú-North in the sandy flats and *monte* fringe country to the southwest of the Gallinazo Group (Quad B–4, northwest). Bennett made a surface collection of grave refuse which he dates as Tomaval Period (Bennett, personal communication, 1949).

Near the cemetery area Bennett reports a section of irrigation plots of a continuous curvilinear pattern. These had been fed by an old canal. Close to the plots was a large, adobe-walled rectangle. The rectangle and the irrigation pattern may also date from the Tomaval Period, or they may relate back to the intensive Gallinazo occupation of this section of the Valley.

V–217.—This cemetery is situated upon a low, sandy plateau at the foot of the hills bordering Huacapongo-South (Quad E–2, northeast). An area of 75 by 40 meters has been much dug over, and human bone is scattered about some 50 to 60 grave pits. No stone or adobe grave construction materials were noted.

A sizable collection from here dates as Tomaval, and has an average rating.

V–66, *V–70*, *V–71*, *V–104.*—These four sites are similar in that all of them show Tomaval Period burials in much earlier midden refuse. V–66 (Puerto Moorin Site) (Quad B–3, northwest) is an extensive midden and adobe structural site on the north margin of the Valley in Lower Virú-North. It has been described as a dwelling site (p. 69) and as a cemetery (p. 100) for the Puerto Moorin Period. The area of Tomaval burials at V–66 is not large. V–70 is a Puerto Moorin Period midden at the southeastern foot of the Sarraque hills (Quad E–2, northeast) (p. 79). The area of looted Tomaval graves is near a small rock spur. Here, about 20 grave pits extend in a band 30 meters wide and 75 meters long. V–71 (Huaca Prieta de Guañape) is the large, black trash heap of the Cerro Prieto and Guañape Periods (Quad A–3, southeast). Nearby, a Tomaval and La Plata Period cemetery was discovered. V–104 (possibly one of the San Francisco cemeteries) is in Middle Virú-North against the hills (Quad D–2, southeast). I viewed the site only from a distance, although a collection was made from there by the workmen. A large Tomaval component, with excellent rating, and a smaller Early Puerto Moorin component (p. 79), also with an excellent rating, were obtained. From the nature of the sherds there was little doubt that the Tomaval component represents burials.

V–96, *V–129*, *and V–135.*—These sites are all Huancaco cemeteries re-used by Tomaval. V–96 (the Carretera Cemetery) is on the outer border of the scrub growth in Lower Virú-North (Quad C–3, northwest) (see p. 231). V–129 (El Cerrito or Huancaquito Cemetery) (Quad C–4, southwest) is near the hill of Huancaquito, Lower Virú-South (see p. 232). V–135 (Cerro del Piño—West Cemetery) is on the west flank of the Cerro Piño, Lower Virú-South (Quad C–5, northwest) (see p. 233).

V–51.—Tomaval re-use of a Huancaco burial place is repeated at V–51 (Castillo de Tomaval) (Quad E–2, southwest) where burials of both periods have come from the cemetery area at the north foot of the great building (see p. 230).

V–146.—This is a group of terrace houses of the Early Puerto Moorin Period in Huacapongo-North (Quad E–1, southeast) (p. 77). It was later used by the Huancaco (p. 233) inhabitants for burials, and after them by the Tomaval, La Plata, and Estero populations.

V–218.—This is a small cemetery in Huacapongo-South (Quad E–2, northeast). Most of the graves date from Early Puerto Moorin, but a few sherds, probably from burials, belong to Tomaval (see p. 100).

V–106 (*Huaca de La Plata*).—This is a mound, perhaps of artificial construction in Lower Virú-North, near the delta (Quad B–5, northwest). The site is a well-known cemetery and as such is the type-site of the La Plata Period. Burial ceramics range from Tomaval through Estero Periods. The mound and its summit constructions may date from the Tomaval or La Plata Periods (see pp. 315–317) although this is not certain.

V–120, *V–122*, *and V–253.*—These are all cemeteries in the beach dunes of Lower Virú. V–120 (Quad B–6, northeast) is 3 kilometers south of the delta and a kilometer back from the beach. The cemetery occupies a small flat hill surrounded by depressions filled with grass and salt water (probably *pukios*). The area of bones, shells, and grave sherds is 50 by 30 meters. Some of the skeletal material was accompanied by cloth remains. The dating of V–120 is very approximate, although it is certain that it is late. I would judge the range to be from Tomaval through Estero.

V–122 is 2 kilometers below the delta and a half kilometer from the beach. Its appearance is much like V–120 except that it is twice as extensive. The dating here is approximate, based upon my own field observations. I would, again, place the site as Tomaval through Estero.

V–253 is a dune site in Lower Virú-North (Quad B–4, northwest) and has been referred to as a midden of the Tomaval Period (p. 278). We made a few test diggings here looking for burials. Two adolescent skeletons were found, each accompanied with small, badly decomposed copper objects or ornaments, but we found no pottery. Dating of Tomaval, La Plata, and Estero Periods is based upon observations of occasional surface sherds.

V–255, *V–256.*—These have been described as dwelling sites (pp. 276–277) for this period. Both are in the dunes of Lower Virú-North (Quad B–5, northwest), and both are also cemeteries. V–255 ranges through Tomaval and La Plata; and V–256 covers Tomaval-La Plata-Estero.

TABULAR SUMMARY OF SITE TYPES OF THE TOMAVAL PERIOD

Living sites:	
Exposed dwelling sites:	
Agglutinated Villages: Irregular Arrangement	26
Semi-isolated Large Houses	17
Compound Villages:	
Rectangular Enclosure	9
Rectangular Enclosure (dubious)	3
Great Rectangular Enclosure	3
Dwelling-Construction Mounds	7
Midden accumulations	15
Earth-Refuse Mounds	6
Community or ceremonial structures:	
Isolated Pyramid Mounds	13
Pyramid-Dwelling-Construction Complexes (casual re-use only)	1
Community Buildings (this is a bare possibility; the site may have been an Agglutinated dwelling)	1
Fortified strongholds or places of refuge:	
Hilltop Platforms	1
Hilltop Agglutinated Village	1
Cemeteries	20

THE LA PLATA PERIOD

PERIOD DEFINITION

The La Plata Period ("time D–C"), which is treated without subdivisions, is estimated by Ford (1949, figs. 4, 5) to have a time duration equal to that of the Huancaco Period. This is about one-half the length of the Tomaval Period. La Plata is not defined by any outstanding ceramic changes. The blackware tradition, which came to prominence during the Tomaval era, increases slightly, and Tomaval Plain reaches its maximum popularity. Queneto Polished Plain remains unchanged in percentage frequency, but new features, such as the rectanglar (in cross-section) stirrup-spout and the small modeled animal at the base of the spout, appear in the type. Both of these shape innovations are generally recognized as diagnostic features of Late Chimu pottery. They are shared by the decorated type, San Juan Moulded (Ford, 1949, pp. 69–70).

La Plata, thus, corresponds to the Late Chimu or Chimu Period of the north coast. Its grave ceramics are assemblages of the types also found in the refuse, a trend noted for the Tomaval Period. The separation of Tomaval from La Plata is, by Ford's admission, not a sharp one. Presumably, he has drawn the line to leave the black-white red pottery of Tiahuanacoid inspiration in the Tomaval Period and to incorporate the typical blackware stirrup-spout vessel of Chimu style in La Plata.

SITE DISTRIBUTION

There is a great diminution in the number of sites between the Tomaval and La Plata Periods (fig. 70). Whereas the former counted 110 sites in the survey, there are only 41 sites identified as La Plata Period. This La Plata decrease is seen everywhere except along the littoral strip where there had been a noticeable concentration of sites during the Tomaval Period. This coastal concentration is maintained, or increased a bit, in La Plata. Elsewhere there is a scarcity of sites. In the Huacapongo branch, where there had been a clustering of sites in Tomaval, there are now only 8 or 9 locations. The Queneto quebrada still has a scattering of sites, but the Middle Valley, as a whole, shows little sign of La Plata. Nor are there any sites in the upper portions of Lower Virú.

An increase in the size of individual sites may account for some, but not all, of this decrease in the total number of sites. Although there is a trend toward larger village sites in the late periods, these larger sites began to appear in Tomaval when there was no decrease in the total count of sites over previous times. There is a possibility that some of the decrease results from the difficulty in site dating, specifically, in distinguishing between the Tomaval, La Plata, and Estero pottery complexes. Yet to maintain the number of sites at the Huancaco and Tomaval level of approximately 100, we would have to accept the continued occupation of most of the Tomaval sites through the La Plata and Estero Periods. There is no reason to believe that Ford's margin of error in the dating would be as great as this. The conclusion is inescapable that there was some depopulation of the Virú Valley beginning in La Plata times and that this depopulation was felt everywhere in the Valley except in a narrow strip just back of the beach.

SUMMARY OF SITE TYPES

La Plata Period living sites of the Exposed Dwelling Site class include the Irregular Agglutinated Village, Semi-isolated Large House, and Rectangular Enclosure Compound types. There are seven of the Irregular Agglutinated Villages. Three of these are extensive terrace house groups of which V–52 and V–145 number over 100 rooms apiece. The other sites are smaller, incorporating from 10 to 30 rooms, and are found on the quebrada floors or outwash plains of the Valley margins. In general, sites of the Irregular Agglutinated types are similar or identical to those of the previous Tomaval Period. Most rooms are medium to large in size (5 to 10 meters), rectangular, and oblong. There are smaller, storage-type rooms in the clusters as

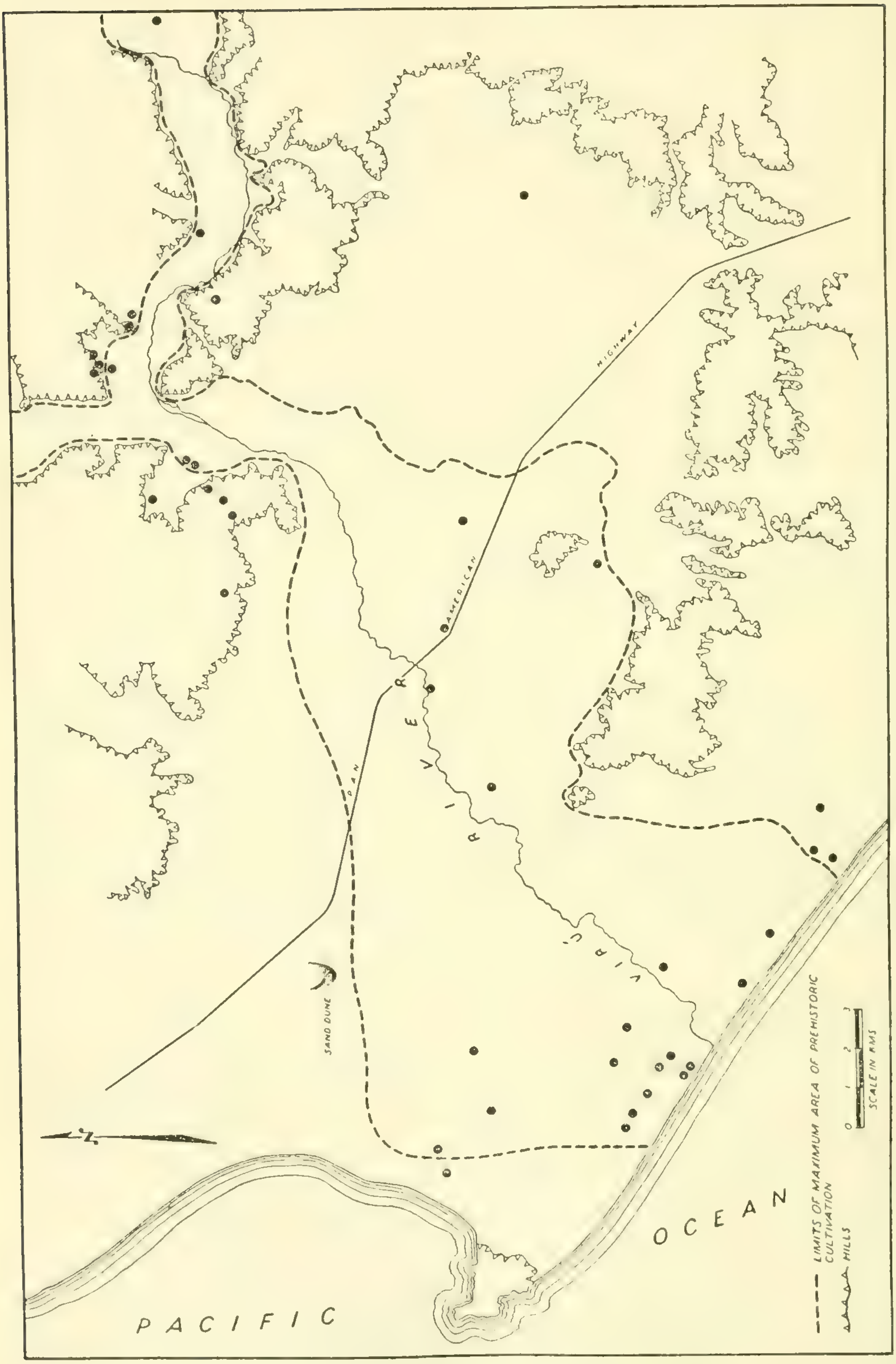
HIGHWAY
PAN AMERICAN
VIRU RIVER
SAND DUNE
PACIFIC OCEAN
N
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
SCALE IN KMS
0 1 2 3

FIGURE 70.—Site distribution map of the La Plata Period.

well as occasional larger rooms. One site, V–31, has an attachment which may have been a very large enclosed courtyard. All are of rock masonry.

Semi-isolated Large Houses are rare for La Plata. We have record of only one site. This is V–145, also an Agglutinated cluster, which has isolated, outlying building foundations.

There are three Rectangular Enclosure Compound sites. V–197 has several compound units. These are relatively small (27 by 15 meters), rock-walled compounds, and similar to the Tomaval Period compounds from the same part of the Valley (V–189, V–191). There are also Irregular Agglutinated clusters in the V–197 site. V–108 is large (90 by 30 meters), constructed entirely of plain rectangular adobes, and subdivided into two large courtyards plus two sections of smaller rooms. Interior arrangement does not appear to be symmetrical as in the adobe-walled Tomaval Period sites, V–297 or V–123. V–269, in the Lower Valley bottoms, is constructed of tapia and plain rectangular adobes. The enclosure is 53 by 42 meters with symmetrical interior arrangement built around two large courts. There are corridors and smaller rooms, and the divisions seem more complex and numerous than in V–297 or V–123; but their balance and arrangement is easier to comprehend than V–108.

The Great Compounds of the previous period are lacking in the sense that we cannot demonstrate that any were built at this time, although we know that the enclosures of V–171 were being occupied through the La Plata Period.

There are 17 La Plata midden sites with only four of these identified as being "pure" La Plata. Most of the other middens were occupied during the preceding Tomaval Period. The Dwelling-Construction Mound, V–162, was used for La Plata Period burials, but the other Dwelling-Construction Mounds which we examined did not show La Plata surface material. Two Earth-Refuse Mounds, both dating from earlier periods, had La Plata pottery components.

Site V–44 is a building with three large, conjoined rooms. The rooms all have wide, carefully faced banquettes of earth and rock. Part of the building is surrounded by a narrow corridor. Because of its unique appearance it has been designated as a Community Building.

The Pyramid Mound is less common for La Plata than for Tomaval. V–81 is an adobe mound or large platform found within a Rectangular Enclosure, or Rambling Enclosure, Compound. This recalls somewhat similar small mounds or platforms within Tomaval and La Plata Compound sites. For example, the La Plata site V–269 had such a structure. The mound V–106 is large, flat-topped, and may date from Tomaval-La Plata times or it may be earlier. In any case, it was definitely used as a cemetery in both periods and in Estero. V–140 is a low, rectangular, flat-topped earth and rock mound with faint foundation lines of old buildings on its summit. Its appearance is much like some of the earth and rock mounds of Huacapongo which have been attributed either to Tomaval or to the earlier Puerto Moorin Period, and it is situated within a complex system of walls as was the Tomaval Period site V–148.

Two refuge sites were occupied throughout this period. V–212 is a Hilltop Platform type site while V–61 is a Hilltop Agglutinated Village.

The thirteen cemeteries of the La Plata Period are, like those of Tomaval (many of which are the same), located near the beach dunes or along the Valley margins. In some cases, earlier dwelling sites were used as places of burial.

EXPOSED DWELLING SITES

Explanatory note.—These are sites which show surface structures of such a type that they can be reasonably interpreted as dwellings. There are 9 such sites for which the structures may be identified with the La Plata Period with good to fair accuracy. Seven of them have no other surface ceramic component than La Plata. The remaining two have La Plata plus other components. These sites are:

La Plata (unmixed)

V–46
V–47
V–52
V–108
V–140
V–197
V–269

La Plata (mixed)

V–31
V–145

There are a number of other sites which show La Plata sherds, either unmixed or mixed with types of other periods. These sites are occupation areas; but they are without buildings, or the buildings on them date from other periods. They are mentioned briefly as "Additional Occupational Sites."

V–46.—V–46 is on the southwestern edge of the Queneto quebrada (Quad E–2, northwest). The site is a series of rock-walled terrace houses located at a point a little less than halfway up the hills which border the quebrada.

Most of the masonry of the site is angular-fractured stone with the flat planes placed to form smooth surfaces; but one old excavation revealed an adobe wall lining the interior of a stone-walled room. The adobes were plain, rectangular, and probably mold-made.

Rooms are arranged terrace fashion, walls contiguous from one terrace level to the next. Placement of rooms with regard to one another seems partially haphazard, partially planned; but the regularity may be due to the terrain. There are two main structural units with some detached one- or two-room buildings (see fig. 39).

Room size in V–46 is rather large, and most of the rooms are oblong. A range of 16 by 6 down to 8 by 4 meters was recorded for these rooms. There are some smaller rooms of living size (5 by 5 or 5 by 6 meters); and others are much smaller (2 by 2 meters). Walls are rather narrow (45 cms.).

I counted over 40 rooms of various sizes, and 100 meters to the south of V–46 there are more house terraces. We did not map these, but I would estimate that they comprise a cluster similar in size to V–46.

Room 1 (indicated on map, fig. 39) was excavated in an attempt to get a sherd sample. It was found to be filled with ash and charcoal. Possibly, the roof superstructure had burned, but Ford reports a fireplace in the center of an adobe floor. Underneath the floor were from 30 to 40 cms. of refuse, earth, and rock to serve as fill to build up the terrace base.

Ford recovered a large collection from this room excavation in addition to our surface collections. Both date from the La Plata Period but are rated as poor in reliability.

V–47.—This house group is at the center of the mouth of Queneto quebrada (Quad E–2, northwest) (pl. 42, *top*). The double-faced masonry walls are 70 cms. thick, and built up of waterworn boulders.[49] Drainage gullies have cut along the site on both sides, doing some damage; but the preservation is fair with walls still standing 50 cms. high.

Rooms tend to be squarish rather than oblong (fig. 22). There is one large room, 16 by 10 meters, but average room size is 7 by 7 meters. There are a few (two or three) small rooms of 2.5 by 3 meters. About 20 rooms can be counted now, but, originally, there were a few more than this. At the east corner of the site there is suggestive evidence of what may once have been a large, irregular-shaped courtyard attached to the group. A gateway to the courtyard is seen in a small L-shaped extension. The up-slope or northwest side of the buildings is formed by a section of one of the defense walls that cross the quebrada. This is the same wall which forms the upper perimeter of site V–45 (Tomaval Period, see p. 246) some 200 meters to the south.

Over-all size of the site is about 35 to 45 meters. The general outline is not regular, and there is only partial planning evident in the alinement and arrangement of the rooms.

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[49] It is to be observed that walls are generally thicker when they are constructed of rounded or waterworn boulders, thinner when made of angular-fractured rock. For the most part, the angular-fractured rock walls are found on the hillsides where rock of this sort is more readily obtainable. On the quebrada bottoms or outwash plains the use of waterworn boulders is more common.

A small surface collection from here is dated as La Plata Period. Rating: poor.

V–52.—This is a group of terrace houses much like V–46 (p. 300). It is located on the northeast slope of a small quebrada which lies to the south of Queneto quebrada (Quad D–2, northeast). The masonry is of angular-fractured rock, and the walls are double-faced and relatively thin. Wall construction is continuous from terrace to terrace, and there is a semiregularity of arrangement to the rooms which is imposed largely by the terraced nature of the site (fig. 52).

We counted between 30 and 40 rooms at the lower part of the slope, and I would estimate that there are between two and three times this many. Total site area is a little over 100 by 70 meters.

Rooms are predominantly oblong. This is, of course, well suited to the somewhat narrow terraces on which they are situated. Five by ten meters is an average size. Some are as much as 15 by 11 meters; some 5 by 5 meters; and a very few smaller than this. Banquettes were observed in two rooms. However, one of these rooms, which was relatively long and narrow, has the entire floor raised, platform-fashion. There is a rectangular, stone-lined, subfloor cist in one room, and wall niches were observed in a small room.

To the southwest of V–52, at a distance of less than 50 meters, is another terrace group containing perhaps as many rooms as V–52. We did not explore this group, but it probably dates either from the La Plata or the Tomaval Periods.

In a generally eastern direction from V–52, some 30 meters away, is a major wall which descends the hill slope from near its top, crosses the quebrada bottom, and ascends the opposite slope. Its function seems to have been to protect the inhabitants of this quebrada from attack from the main valley. As noted on the map (fig. 52) there are three rectangular platforms near this wall. One, 17 meters square and outlined with a thick stone wall, is attached to the wall on its outer side. The other two are a short distance away. These may have been foundations for lookout or blockhouse stations.

There is a collection of over 80 sherds from the site, proper. It dates as La Plata, and is rated as average.

V–108 (La Plata Compound).—La Plata Compound is in the sand flat and dune country back of the beach in Lower Virú-North (Quad B–5, northwest). The mound, Huaca de La Plata (V–106) is 1 kilometer to the northwest.

V–108 shows up nicely in the air photos. It is a compact building or site unit, enclosed completely in an adobe wall (fig. 71). The enclosure is rectangular and oblong, measuring 90 by 31 meters. The rectangle is not quite perfect. The two long sides are of a length; but the northwest end is 30 meters while the southeast end is 32 meters.

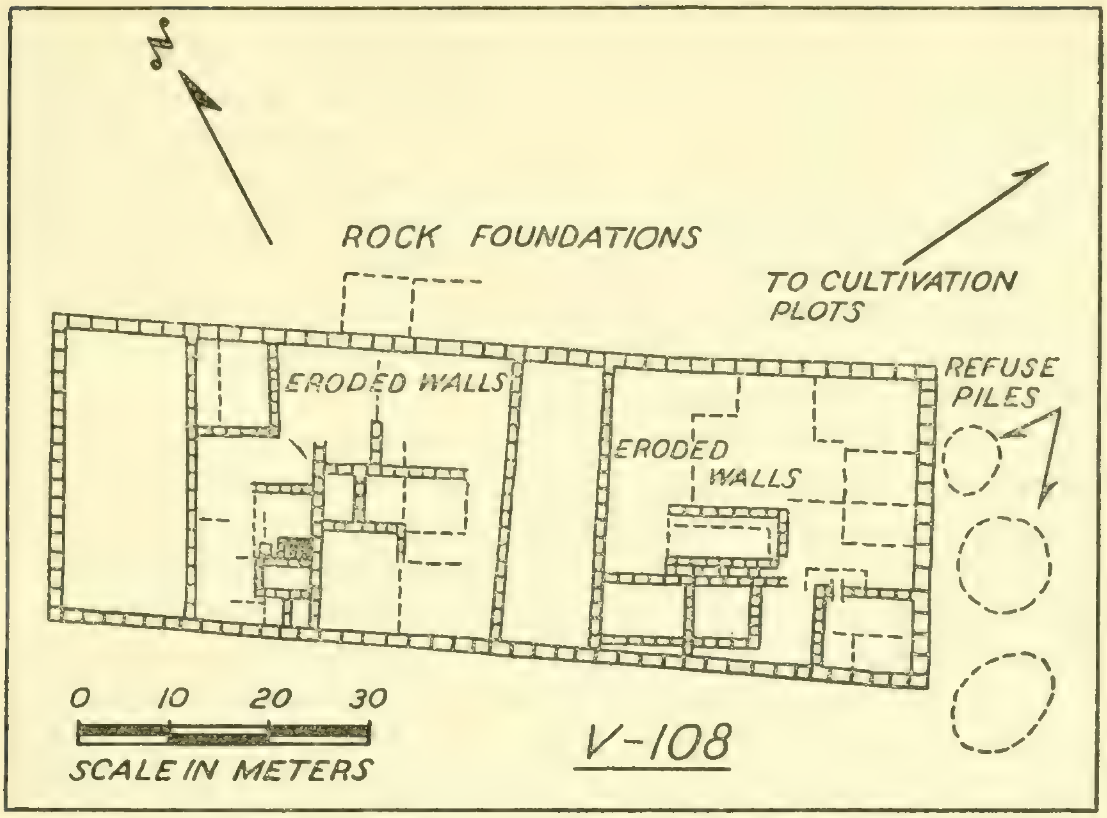

FIGURE 71.—Ground plan of V–108. La Plata Period.

The site has been swept with wind and sands, without protection of vegetation, and some of the walls are worn down almost to ground level (pl. 43, *top*). Others still stand as high as 50 cms.

Construction is of adobe, both for the outer wall and for the interior partitions. The outer wall is 75 cms. wide; partition walls vary in thickness, but are in all cases less wide than the outer wall. The adobes used are all rectangular, plain, and mold-made; there is considerable minor variation in adobe size. A length of 32 cms. was very common, and this was combined with dimensions of 15 by 15, 25 by 20, and 20 by 13 cms. There were also some extremely flat adobes (30 by 20 by 8 cms.). In the outer wall the adobes were laid in four tiers, which, together with the mortar, totaled to a width of 75 cms. Interior walls were often only two tiers wide.[50]

Within the compound there are two large rooms or courtyards. One at the northwest end extends the width of the compound (31 m.) and is 14 meters on the other dimension. The other courtyard is located at about midpoint in the compound, and is somewhat smaller (10 meters wide) than the first. Neither of these courts had any signs of partitioning walls. Nor did either show any doorways leading to the outside or the inside of the compound.

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[50] I am indebted to Donald Collier for some of this information. Collier made test excavations at V–108.

The remainder of the space in the enclosure is taken up with two large sections, each of which has been divided into a number of rooms or divisions. Erosion has destroyed some of the partition walls in both sections, so that complete patterns are impossible to record; however, it can be seen that room arrangement was not symmetrical and that room size varies a good deal. Eleven by eight meters is the largest room, and there are others only slightly smaller than this as well as some much smaller (pl. 43, *center*). Collier excavated a row of small bins or cubicles, between two rooms, which were about 1 meter square (pl. 43, *bottom*).

Careful alinement of the walls of one room with those of one adjacent to it was not always followed. There is also one example of two rooms being built close to, but not in contact with, nor completely square with, the outer wall. This has left a narrow, wedge-shaped corridor between the walls of the rooms and the outer wall.

There are no banquettes within V–108, although a space between two rooms in the southeastern section has been built up solidly of adobes to form a block 8 by 2.5 meters. I noted only one certain doorway in the entire complex. This is in an interior partition. But the fact that the walls have been eroded so low in most places has probably destroyed doorsills elsewhere.

On the northeast side of the site there are faint evidences of stone foundations for two exterior conjoined rooms built onto the compound wall. These are the only rooms or walls outside of the enclosure. Possibly, stone foundations were used in other parts of the site, but I saw no sign of this.

In general, V–108 gives the impression of a living site within a planned rectangular enclosure. Inside the enclosure wall the planning or arrangement is less definite. The two big rooms or courtyards were, perhaps, a part of the original layout. On the other hand, the smaller rooms, apparently the living and storage quarters, may not have been laid down simultaneously.

Just outside the main wall at the southeast end of the site there are some small piles of living refuse. Pottery collections from these middens and from within the site itself date as La Plata Period. Rating: average.

More middens lie off to the north and east of the compound. In fact, what appear to be thin but extensive deposits are found more or less continuously for the kilometer between V–108 and V–106.

About 100 meters to the northeast of V–108 are a series of clay-lined, curvilinear garden or irrigation plots, identical to those near V–106. These same plots are also seen intermittently to the southeastward, and probably are a part of the same irrigation system that is seen near the site V–255 (see p. 276).

V–140.—In Huacapongo-North (Quad F–2, northwest) there is a site complex on the outwash plain below the hills that consists of several units. V–37 is a Pyramidal Mound of the Tomaval Period (pp. 281–282); V–147, also Tomaval Period, is a series of small rooms clustered near the gateway of a large enclosure (pp. 248–250); and V–140 is a dwelling group of rock-walled rooms plus a low, rectangular flat-topped mound. The V–140 units are dated by ceramic collections as being La Plata. (See figure 53.)

The dwellings of V–140, if such they are, are situated upon an irregularly shaped hill which is probably of natural origin. This hill is approximately 160 meters long, 55 meters wide, and 2 meters high at its crown. It has been built over in modern times, and in some places ancient wall foundations appear to have been added to in order to construct corrals. For the most part, however, the V–140 foundations are aboriginal.

A connected unit of eight rooms is near the center of the hill. Four of these rooms are large (14 by 12 meters or a little larger or smaller than this). Of these four, two have banquette features (pl. 41, *center*). The remaining rooms are considerably smaller. A little to the west of these foundations there are traces of other ancient stone walls which have almost been obliterated by modern building. On the edge of this area there is a circular stone-walled foundation, 5 meters in diameter, with a doorway. Thirty-five meters northwest of this first circular foundation, near the edge of the hill, there is another. This second one is 7.5 meters in diameter and has no doorway or aperture. In close proximity to the second circle is a short section of an adobe wall with fragments of painted (red) plaster. The shape and nature of the adobes were not determined.

At the eastern tip of the hill there is a curious feature. At this end, the hill gradually tapers down to ground level; but on the tapering slope there is a very small knoll or rise, probably of artificial construction. It seems to be constructed entirely of small rocks. What appears to be another circular foundation is situated on the crown of this knoll. This foundation has a spirallike attachment of a single row of large stones. A path, lined with rows of large stones, leads up to this little knoll (pl. 41, *bottom*).

Detached from the hill, and about 30 meters to the west, is a small, low, rectangular mound, apparently of artificial construction. The mound is 22 by 25 meters and approximately 1 meter in height. The summit is perfectly flat and is enclosed in a stone wall 20 by 16 meters. Like similar wall foundations on other Pyramidal Mounds, this one may have been constructed primarily as a retaining wall for the mound fill, or it may have been the foundation of a building, or both. There are, on this mound, other foundation walls indicating smaller buildings or rooms within the larger. On the east side of the mound, leading off in the direction of the hill with the dwelling constructions, is an avenue or roadway lined with two rows of stones or, possibly, wall foundations.

Between the mound and the hill is the course of an old canal. This canal, presumably a distributary which had been diverted out of the upper canal, runs north and west, eventually rejoining with the upper canal.

The complex of walls around the site is probably functionally related to V–140. These have been discussed with site V–147 (see pp. 248 ff.).

A large collection (over 600 sherds) was gathered from the vicinity of the settlement hill, from the small platform mound, and from the area surrounding both. This collection has been dated by Ford as La Plata Period. Validity: average.

V–197.—This is a series of rock-walled dwelling units located near the upper extremity of the Huacapongo (Quad G–2, northwest). Sites V–189 and V–191 of the Tomaval Period (pp. 251, 269), which are much the same type, are only 100 meters to the north.

The surrounding land is the gravel plain of the Valley floor which is 2 kilometers wide at this part of the valley. A short distance downstream are modern cultivated fields, but the area of the site is not now in cultivation. Twenty meters or so to the east and southeast there is an extensive area (perhaps 100 meters in diameter) of battered foundations which may relate to the same periods as either V–197 or V–189 and V–191.

There are five building groups in V–197 (fig. 54). Two of the groups are planned rectangles subdivided into rooms. Two others may have been such rectangular compounds, but are not well preserved so it is impossible to be sure. The fifth unit is an irregular arrangement of conjoined rectangular rooms.

In all of the V–197 units it was noted that the outer walls of the compounds were constructed of larger boulders than those used in V–189 and V–191. These outer walls averaged about 1 meter in thickness. Interior walls were made of smaller stone and are considerably thinner. Walls in some of the rooms are still well preserved and suggest that the buildings were constructed to their full height in stone.

The southernmost of the V–197 compounds is a perfect rectangle, 27.5 by 15 meters. It has one rather large room with a small, high banquette or platform which has niches on its side walls. A closet-like room is in one corner of this larger room. Most of the floor space of this closet is taken up with a carefully lined subfloor stone cist. Opening off of the larger room is a doorway which leads onto a wide banquette. This banquette seems to have served two smaller rooms. One of these smaller rooms (8 by 4 meters) has two small storage bins along one wall. Along the north side of the house there is a narrow corridorlike room. Similarly, along the west side there is another such corridor, although this one has small rooms, or storage bins, at each end.

The other rectangular compound is 25 by 12.5 meters. It, too, is a perfect rectangle, although there are evidences of two or three small rooms attached to the south wall. Within the enclosure are 5 principal rooms, ranging from 12.5 by 7.5 down to 7 by 3.5 meters in size. In addition, there are four storage or closetlike rooms.

The two semidestroyed compounds contained rooms of about the same size as those described. In addition, there were also bins or closets in one of them.

The irregular compound has seven rooms of living size and five small rooms. The largest room is 10 by 8 meters. There is another 8 by 8, one 10 by 5, an irregularly shaped one 10 by 10, and two smaller ones in the neighborhood of 5 meters square. There is a banquette in one of the larger rooms, and the floor of one of the small closetlike rooms is raised in platform or banquette-fashion.

In all of these groups, doorways are found leading to the outside and between rooms.

The total area of V–197, as we have defined it, has a diameter of 100 meters. The individual compounds are comparable in size, appearance, and, undoubtedly, function to the units described as sites under the numbers V–189 or V–191. The arrangement of compounds with reference to each other apparently follows no special plan, and the directional orientation of the compounds varies. The units are from 10 to 20 meters apart.

A collection gathered from all five rectangles, and numbering just under 300 sherds, is dated as La Plata, with an excellent rating.

V–269 (*Huaca del Caballero*).—Huaca del Caballero is an adobe-walled rectangle of the planned sort which is located in the cultivated fields of Lower Virú-South (Quad B–5, northeast) about one-half a kilometer from the river. The site derives its name from the fact that it is haunted by a ghostly specter on horseback who regularly appears on moonlight nights to pose in the gateway of the relief decoration (see map, fig. 72). In spite of this dire circumstance, the site, or a small part of it, was occupied in 1946 by a farmer and his family.

The rectangle is a perfect 53 by 42 meters. The lower portions of all of the walls are of tapia. The outer wall of the enclosure measured 90 cms. wide near the base and tapered slightly toward the top. Sections were over 2 meters in length and were carried up to a height of 2

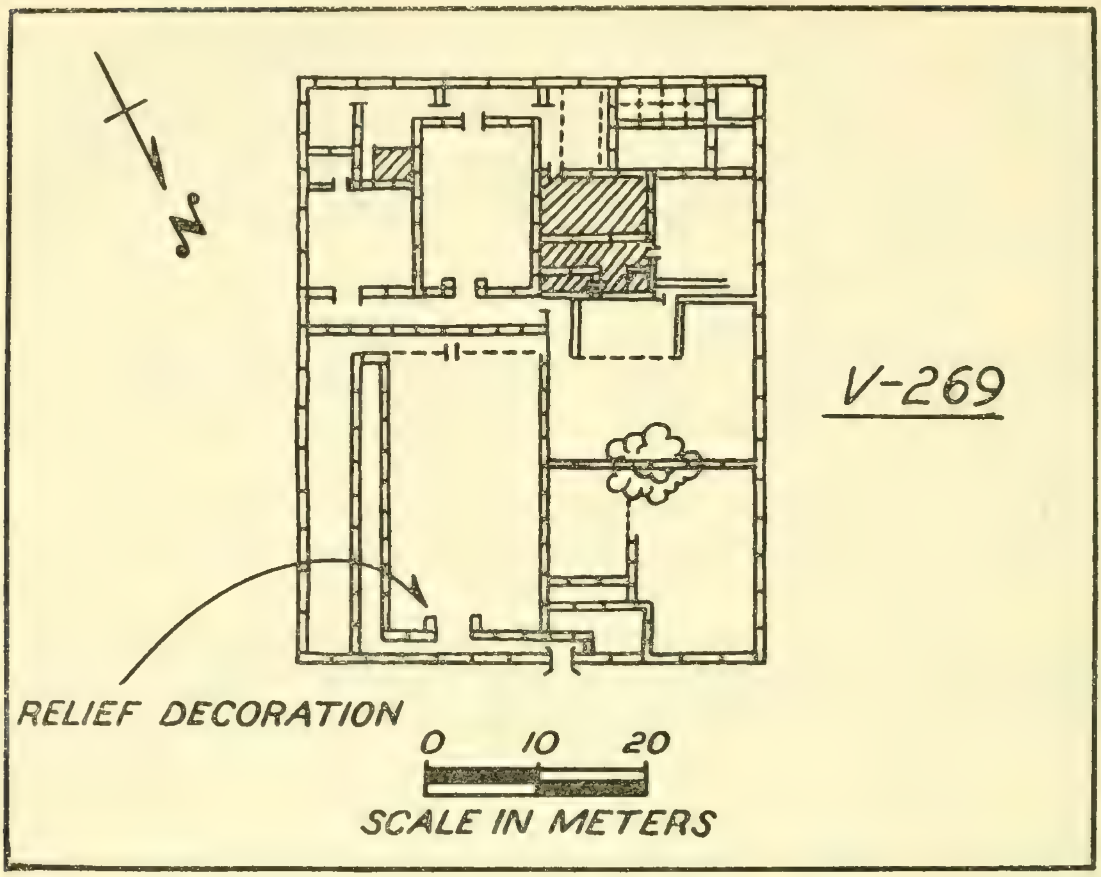

FIGURE 72.—Ground plan of V–269. La Plata Period.

meters. Above this, in some places where it is still preserved, there is an addition of plain, rectangular, mold-made adobes (37 by 19 by 13 cms.). This additional height of the small adobes was at least 50 cms. Perhaps it was more, but the tops of the walls have been destroyed.

Interior partitioning walls are, similarly, of tapia at the base with small adobes at the top; but these walls are not as thick as those of the outer enclosure.

The gate to the compound is on the northeast side, slightly off center. There seems to have been no other entrance or exit to the outside. Upon entering, one turns to the left and walks a few steps down a narrow corridor. The corridor opens onto a large courtyard, or huge room, 26 by 14 meters (pl. 45, *center*). This opening is the main gate to the courtyard, and is flanked on the inside by two massive, rectangular columns. The interior sides of these gate blocks, facing the courtyard, are decorated in low relief sculptures. These bas-reliefs were apparently made by carving the wet mud of the adobe when the columns were poured (pl. 45, *bottom*). It is this rather impressive interior gateway that is honored by the "Caballero's ghost."

The same corridor by which one entered the compound proceeds past the gate leading onto the courtyard, turns right, and enters onto a long narrow corridor which, as far as I could determine, is and was a blind alley leading nowhere. Another corridor, L-shaped, lies on two sides of the courtyard, but means of entrance or exit from court to corridor are not divulged in the foundations.

In general, the question of doors is puzzling elsewhere in V–269 as it is not evident how the inhabitants passed between many of the rooms. There are, however, places where doorways could have been which are now semidestroyed or eroded. One modern doorway which I have not indicated on the map has been cut through into the small room shown just to the right of the main outer entrance. This room is now roofed over and used as living quarters by the people occupying the site.

Most of the rooms which are in the northern half of V–269 are large (see map, fig. 72), but in the southern portion of the site there are more subdivisions. A corridor separates these last from the larger rooms, and a gateway opening off of this cross-corridor enters onto what might have been another and smaller courtyard. This one is 16 by 11 meters. Inside the north gateway there are rectangular adobe columns on each side of the opening much as in the larger court. These are not, however, decorated. On each side of this second court there is a maze of smaller rooms, and at the southwest corner of the site there is one room which seems to have been divided into a double row of binlike rooms each less than 2 meters square. Other rooms vary in size from 10 by 10 meters to 3 by 4 meters. There also may have been a sort of corridor or passage along the southerly end of the compound, although it is not as clearly defined as the others to which we have referred.

There is one small, square banquette in the corner of a small room. A more interesting feature is that three rooms in the southern half of the site seem to have been built up solidly to a height of 2 meters or more. The walls of these three rooms can still be traced on the surface, and it would appear that they had been filled with adobe after they had been constructed. Doorways, for example, still open into them although they are solid blocks. It is possible that these blocks are refuse and fallen adobe; yet the confined and limited nature of the feature makes it look like purposeful construction of some sort. Excavation would be necessary to determine the constructional and functional nature of such a block or platform.[51]

Throughout, the walls of V–269, many with plaster and red paint, are better preserved than those of most other buildings which we visited in Virú. The position of the site in the open plains of the lower Valley may account for some of this. In such a location the site would not suffer the devastating floods that have damaged so many prehistoric buildings on the flood plains near the hills. Then too, it is possible that the compound has been occupied for a long time. Colonial and modern period inhabitants would have kept down vandalism and destruction to some extent even though they did not maintain the compound in the manner of the aboriginal builders.

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[51] See site V–124 (pp. 324–329) for a discussion of a similar feature.

There is no refuse outside of the compound today. The cultivated fields extend up to its very walls. Within the compound we picked up quite a selection of sherds (over 200). We had anticipated finding Colonial and modern ware among this, but the sherds turned out to be wholly prehistoric and dated as of the La Plata Period. Rating: Average.

V–31.—V–31 is in Huacapongo-North not far from the Corral Gate (Quad E–1, southeast). It is just above the upper or northernmost of the Quebrada defense walls. Site V–30 (dated as Huancaco Period) is below it, and V–204 (Puerto Moorin and Tomaval) is above.

The site is an irregularly arranged cluster of conjoined, rock-walled rooms (fig. 38). There are between 17 and 25 of these. One large room, 15 by 13 meters, has a banquette. There are other rooms from 9 by 8 down to 5 by 5 meters, and there are also some smaller closetlike compartments. Extending out in an L-shape from the southern side of the largest room is a wall which may originally have formed a large enclosure. One arm of the L is 35 meters long, the other 60 meters. It ends indeterminately as though it had been destroyed by a flood.

There were two pottery components from this site. A small one is dated as Early Puerto Moorin, and a much larger one is placed as La Plata with an average validity rating. It is my opinion that the La Plata collection dates the buildings.

V–145.—This is an extensive terrace house cluster of rock-walled rooms in Huacapongo-North (Quad E–1, southeast) (fig. 15). It is on a steep slope, between the 210- and 250-meter contour lines. Two other sites, V–203 and V–144, both of the Early Puerto Moorin Period, are nearby. In fact, it appears as though the builders of V–145 might have despoiled these earlier sites to build their own.

The terrace arrangement is marked (pl. 42, *center*). Walls of rooms are connected from terrace to terrace, and the width of walls is from 50 to 70 cm. They are done with double facing and with a small amount of rubble fill. Doorways are marked with large upright stones as door jambs and stone slabs as sills. Rectangular subfloor cists (pl. 42, *bottom*) and banquettes are fairly common features. Some of the latter are small, quarter-circle platforms in room corners.

In room arrangement there is a suggestion that four or five rooms may have been built as a unit. Later, such units were added to or were joined with others. Rooms are rectangular and oblong with an average size of about 9 by 5 meters. There are some smaller rooms, although I noted none of the very small binlike compartments. Some 50 rooms can be distinguished, and there is terrace space for this many more. Total site area is about 100 by 80 meters.

Combined surface collections from V–145 show the La Plata Period well represented and the Early Puerto Moorin Period represented by only about one-sixth as many sherds. This, plus the nature of the site, argues for a La Plata dating.

Additional occupation sites.—There are 17 sites which show La Plata Period ceramics but on which no structures can be identified with these ceramic remains or on which no structural evidences are to be found whatsoever. These are:

V–17
V–107
V–116
V–118
V–119
V–144
V–171
V–203
V–253
V–255
V–256
V–258
V–283
V–286
V–305
V–311
V–312

Four of these are pure La Plata midden sites: V–107, V–116, V–118, and V–283. V–107 (Quad B–5, northwest) is in the beach dune country north of the Virú delta. The site appears as a sprinkling of crushed shell midden and grey organic material over a series of little dunes. Total area is about 100 meters in diameter. V–116 (Quad C–6, northwest) is on the south side of the delta. The area of the site is an elongated dune 75 by 20 meters and 3 meters high (pl. 45, *top*). Shell and refuse appear to be very superficial. V–118 (Quad C–6, northwest) is in the same part of the Valley as V–116. This site, as we defined it, extends along an old beach ridge for perhaps 400 meters. Crushed and whole shell was found for this full distance, but sherd deposits were only intermittently scattered along the ridge. V–283 (Quad A–3, southeast) is an extensive midden on the beach flats near Cerro Prieto. Sherds and shell could be seen over an area 500 meters in diameter.

V–119 (Quad C–6, northwest), V–305 (Quad B–5, northwest), and V–253 (Quad B–4, northwest) are all beach dune middens with no structures which date from the late periods, including La Plata. V–255 (Quad B–5, northwest) and V–256 (Quad B–5, northwest) are dwelling, midden, and cemetery sites dating from Tomaval and La Plata. V–286 (Quad B–4, northwest) is a series of irregularly shaped *pukio* basins with some late period refuse material, including La Plata.

V–144 (Quad E–1, southeast) and V–203 (Quad E–1, southeast) are midden collections from terrace house sites in Huacapongo. The buildings on these sites probably date from the Puerto Moorin Period (pp. 75–78).

V–171 (Quad C–4, northeast) is the big adobe quadrangle site in Lower Virú-South which probably was constructed during the Tomaval Period but was occupied during La Plata and Estero (see pp. 265 ff).

V–258 (Quad B–4, southwest) is a Dwelling-Construction Mound in Lower Virú-North. It dates from the Gallinazo Period (pp. 127–128), but there are later ceramic materials represented there, including La Plata Period.

V–17 (Quad D–1, southeast) is Queneto Temple, a site of highly questionable dating. Both Bennett (1939, pp. 22–27) and Ford found La Plata pottery there among other types. The site is described under "Sites of Questionable Date" (pp. 338–342).

V–311 (Quad D–3, southwest) is a site of several deeply buried deposits on the banks of the Virú River near the center of the Valley. At a little less than a meter below surface, Junius Bird (personal communication) found La Plata Period sherds on top of an old flood band. Gallinazo and Guañape Period materials have been taken from lower layers in the silt.

V–312 (Quad D–2, northeast) is a rock shelter in the hills of Middle Virú-North. It dates as Tomaval, La Plata, or both (see p. 277).

DWELLING-CONSTRUCTION MOUNDS

Mounds built by structural accretion in the manner of those adobe house units described for the Gallinazo and Huancaco Periods were not found for the La Plata Period. Even the re-use of such Gallinazo-Huancaco mounds, as we described for Tomaval, is very rare. Our survey records only one example, V–162 (Huaca de la Cruz) (Quad D–2, southwest). La Plata Period burials are reported to have been found here (Bennett, 1939).

PYRAMID MOUNDS

Explanatory note.—There are only a few mounds with La Plata Period associations that can be described as purposefully and artificially constructed solid platforms or flat-topped pyramids. Of the three which are so identified, two have unmixed La Plata pottery components. The third mound has a pottery collection ranging over the three final prehistoric periods of the Valley sequence (Tomaval, La Plata, and Estero). All three of the mounds are somewhat different in appearance and in immediate archeological surroundings.

The three sites in question are:

V–81 (*Palacio de Bitín*).—This is an adobe-walled quadrangle enclosing a mound or platform and is located on the sandy plain off the south slope of Cerro Bitín (Quad D–4, southeast) (pl. 46, *bottom*).

The site has been swept and partially covered with sand, and has also suffered erosion from sand-blasting. From the surface, as one approaches it, the impression is that of a mound; from the air photos the quadrangular enclosure feature is more distinctive and is reminiscent of the Compound Villages like V–297 (Tomaval Period, pp. 257–258) or V–269 (La Plata Period, pp. 307–310).

The whole structure is located on the summit of a natural rise or low, rounded knoll. The planned rectangle has additional rooms or courts attached to and in perfect alinement with its northwest corner (fig. 73). The rectangle is 70 by 67.5 meters. This attachment on the northwest corner suggests that other rectangular rooms or corridors were once present but have since been destroyed or buried by the sands. The main rectangle is divided into four principal parts. Along the southeast side there is a long corridor, 16 meters wide. At the southeast corner there is a very definite doorway entering from the outside of the building into this corridor. From the corridor into the other parts of the building there is no noticeable door, but one may have once existed. The other three divisions lie at right angles to the corridor. The one along the southwest side of the building is also corridorlike, being 11 meters wide. There are suggestions in the foundation remains that it was once subdivided into smaller rooms. Back of this second corridor-room are two large divisions which parallel it. These are 26 and 30.5 meters wide, respectively.

It will be noted on the map (fig. 73) that the eroded adobe platform or mound occupies a central position in the middle division of the rectangle. This mound, which appears to be of solid adobes, is between 2 and 3 meters higher than the floor of the rest of the enclosure. Its area seems to be about 25 by 20 meters, although this is not definite. The form of the mound may have been rectangular, but erosion has made even this uncertain. In addition, the surface of the mound, as well as much of the immediate surroundings, had been thoroughly and damagingly cut to pieces by *huaqueros*.

Construction of the walls of the quadrangle was in both stone and adobes. Stone seems to have been the foundation material. The southeastern wall can now only be traced as a low stone foundation. The absence of fallen stone near this wall, and the fact that the southwest wall is very clearly made up of adobes over a stone foundation, indicate that the entire building complex has a foundation in stone surmounted by adobes. Adobes are rectangular, plain, mold-made and range in size from 29 by 19 by 13 to 36 by 23 by 12 cms. In several of the walls we noted alternate coursing from one row of adobes to the next so that cracks or seams could not easily open along the sutures of the masonry. The adobe bricks were set in mud mortar.

Along the southwest outer face of the quadrangle there is abundant rubbish, including potsherds. This is the steepest face of the enclosure, and it appears as if refuse had been thrown over the wall along this point. Upon the platform summit of the mound potsherds had also been tossed about, and what appeared to be small cribs had

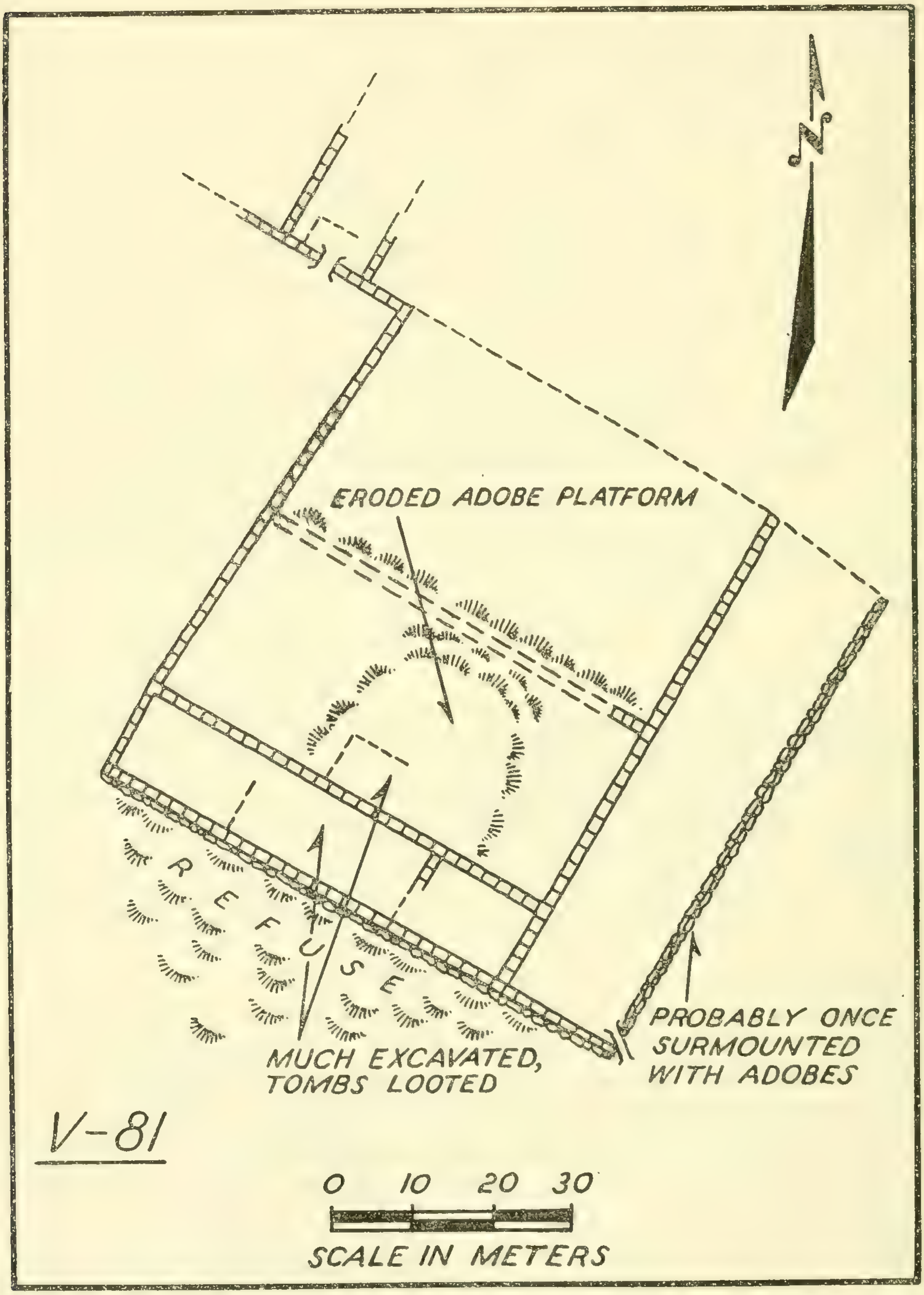
N
ERODED ADOBE PLATFORM
REFUSE
MUCH EXCAVATED,
TOMBS LOOTED
PROBABLY ONCE
SURMOUNTED
WITH ADOBES
V-81
0 10 20 30
SCALE IN METERS

FIGURE 73.—Ground plan of V–81. An adobe-walled compound with an interior platform mound. La Plata Period.

been opened up in the floor of the platform. These cribs or prepared pits must have been graves from which bones and grave pottery had been looted.

It will be recalled that in some of the other adobe-walled compounds of the Tomaval and La Plata Periods there were sections within the walls which seemed to be small, solid platforms or mounds. This V–81 mound may be such a feature, and the site, as a whole, may be closely related to some of those described as Compound Village dwelling sites. The size and impressiveness of the V–81 mound is, however, unusual when compared with the incorporated platforms in the dwelling compounds. There is, also, something of a parallel between V–81 and the Pyramid Mounds and attached wall systems of the Huancaco (sites V–149, V–88–89–90–91) and Tomaval (V–148) Periods.

A large collection from here is dated as La Plata Period but rated as poor.

V–106 (*Huaca de La Plata*).—This Mound, in the beach dunes of Lower Virú-North (Quad B–5, northwest), was referred to by Bennett under this name (Bennett, 1939, pp. 22, 77). It has also been listed as a mound and cemetery of the Tomaval Period. We know that it was a La Plata Period cemetery, and may have continued as a burying ground in Estero times. Perhaps its only use during the Tomaval, La Plata, and Estero Periods of the Valley's history was for this purpose; and it may be that the mound was constructed in earlier times. There is no proof of this, however, as no pottery of a pre-Tomaval period was picked up on the site.

The mound stands in a clear stretch of flat sandy plain with only scrub vegetation dotted about the landscape. From the surface, it appears to be a large sand, shell, and midden heap, but its regular shape, and the steepness of its sides indicate partial if not complete artificial and purposeful construction. If this is so, it is likely that the interior structure beneath the sand is adobe. Height above the plain is about 12 meters. Basal measurements on a north-south line are 110 meters and 60 to 70 meters on an east-west line. Its original shape may have been rectangular.

The flat crown or summit of the mound has the foundations of a structure. This was a rectangular building following the edges of the summit platform. The walls were made of large boulders (both angular and waterworn) and topped by adobes. We cleared a section along the west side of the rectangle. Here, the wall measures 85 cms. in width, and the stone foundation was capped by three courses of adobes. On the south side of the rectangle, the wall evidence was similar; but on the north only the stone foundation remained. For the east side there is little evidence of any wall. Total dimensions of the building were 23 meters north-south and 18 meters east-west. The sides were not perfectly matched as to length, and the measurements given indicate a mean within a margin of 50 to 75 cms.

The adobes in the west wall are all hand-made and of two shapes: bread-loaf and rectangular (pl. 46, *center*). These two adobe forms were used interchangeably in the wall in a random fashion. The oval bread-loaf forms measured from 28 by 24 by 11 up to 35 by 25 by 12 cms., and the rectangulars were from 26 by 15 by 12 to 32 by 18 by 10 cms. Clay rubble and clay mortar had been used in laying the adobes. In a section 2 meters long, 85 cms. wide, and 1 adobe layer in thickness, I counted 14 loaf-shaped and 5 rectangular adobes.

There are no regular terraces on the slopes of the mound, or, if these once existed, they have been abraded away or covered by the sand. However, on the south slope there is a faint suggestion of a wall running across the slope at a short distance below the summit platform.

The south and east faces have been much dug over, and it has been from here that the Tomaval and La Plata graves have been exhumed. These seem to have been simple, shallow-pit graves in the sand, revealing no adobe interior. Human bones, copper bangles, textile fragments, and potsherds are found around these graves.

To the west and east of the mound, on the flat, are old cultivation patterns lined with dry, crackled clay precipitates. On the east side of the mound a section of an old canal can be traced for a short distance. This is probably the same canal that again appears on the the west side of the mound where it once fed water to a system of interlocked S-shaped ditches (pl. 46, *top*). These patterns of ditches are still traced over an area 70 meters in diameter, but it is obvious that they were once more extensive and have been worn away or covered by sand (fig. 79). There is little doubt that the cultivation plots surrounding V–106 are a part of a much larger system which stretched from here eastward as far as site V–255 (see p. 276), encompassing V–108 (p. 302) in their midst.

To conclude for V–106, we can say that the site was very likely an artificial mound. On the summit of this mound is a large rectangular enclosure made of stones and hand-made adobes. The bread-loaf hand-made adobes are not typical of the adobe constructions of the late periods and suggest the adobes of the earlier periods, such as Puerto Moorin. There is, then, a possibility that V–106 was built in these early times. That the mound was used as a place of burial during Tomaval, La Plata, and, probably, Estero Periods is indisputable. We know also that the site was surrounded by irrigation and cultivation plots and that these plots seem to be a part of a much larger cultivation system here in the beach country of Lower Virú-North. Because of the general site associations with this cultivation system, it seems probable that the mound dates from the Tomaval and La Plata Periods.

The collection of sherds which we gathered from V-106, largely from the old graves, dates as Tomaval, La Plata, and Estero, and has a poor validity rating.

V-140.—(See Quad F-2, northwest.) This is an earth-and-rock platform mound found near the dwelling site V-140 and given the same survey number. The mound was described with the dwelling sites (p. 305).

EARTH-REFUSE MOUNDS

V-234.—(See Quad D-4, northeast.) This mound was described under the Puerto Moorin Period (p. 91). La Plata rubbish and sherds were also recovered from the surface.

V-291 (*Carmelo Hacienda, Mound No. 1*).—(See Quad B-5, northeast.) This mound has been described under the Huancaco Period (p. 222). Tomaval and La Plata sherds were also found.

COMMUNITY BUILDINGS

V-44.—This structure is in the lower part of the Queneto quebrada (Quad E-2, northwest). It is a rock-walled building constructed of double-faced, cyclopean masonry. It differs markedly from other structures we have reviewed in its ground plan and general appearance. Because of this, I have hesitated to include it among the dwelling sites.

The plan is that of two very large rooms or quadrangles attached to each other (fig 22). The larger of the rectangles is 28 by 17 meters, and is enclosed on three sides by another wall, leaving a narrow corridor of a little less than 2 meters width between the wall of the rectangle proper and the enclosing wall. On the northeast side this outer or enclosing wall serves as one wall of the second and smaller (17 by 15 meters) rectangle. This second rectangle is not surrounded with another wall, but is separated from the first building by the width of the corridor referred to above.

The larger rectangle was apparently divided into two rooms (see map. fig. 22). A wide earth banquette faced with a row of stones encircles the southeastern room on all sides (pl. 41, *top*), and on one side of this room the banquette is constructed in two levels. Ford and I made a test excavation (as indicated on the map) through the outer enclosing wall, the inner wall, and the double-level banquette. Interestingly, our cut passed through two doorways, one in the outer and the other in the inner wall. They were each about 60 cms. wide, and they were not alined but offset, one from the other, at a distance of a little over 1 meter. In the excavation it was noted that the outer wall was based on the natural ground level while the inner wall was set upon the top banquette level. This resulted in the lower banquette level being on about the same elevation as the ground outside the structure while the interior floor of the room had apparently been excavated to a depth of about 30 cms. below surrounding ground level.

The northwestern room of the larger rectangle has a banquette on only two sides, and the smaller rectangle also has a banquette feature on two sides. The smaller rectangle has the additional features of a room, 10 by 4 meters, attached to the outer side of its northeastern wall, and a possible interior division of the main room.

Throughout these constructions the walls were noted as being slightly less than 1 meter in width. Waterworn boulders were used, all of small size. Today, the walls of this structure stand higher (1 meter or more) than those of any of the other buildings in lower Queneto.

A good-sized collection from the site, taken from the surface and from our small excavation, dates as La Plata Period, and has an average rating.

FORTIFIED SITES

V–61.—This site (Quad D–2, northeast) is a defensible Agglutinated Village site perched on a high hilltop overlooking the Valley in Middle Virú-North. It has been described under the Tomaval Period (pp. 290–292), but La Plata and Estero refuse levels are also represented (see Ford, 1949, p. 47, fig. 4).

V–212.—(See Quad E–2, northeast.) This is a series of house platforms on a crest in Huacapongo-South. The site has been described under the Puerto Moorin Period (p. 99). Building was probably undertaken in Tomaval times, and occupation or occasional use continued into La Plata, Estero, and Colonial times.

CEMETERIES

Explanatory note.—There are 13 sites which are recorded as places of burial for the La Plata Period. None of these are unmixed sites. They are:

V–71
V–106
V–120
V–122
V–144
V–146
V–203
V–205
V–253
V–255
V–256
V–304
V–313

In addition, the Dwelling-Construction Mound of the Gallinazo and Huancaco Periods, V–162 (see pp. 123 ff.), and the Pyramid Mound of the La Plata Period, V–81 (pp. 312 ff.), served as La Plata cemeteries.

V–106, *V–120*, *V–122*, *V–253*, *V–256*.—These sites are all multiple-use cemeteries referring to the Tomaval, La Plata, and Estero Periods. They are in the coastal dune country. Some have adobe structures in association. All except V–106 are described for the Tomaval Period (p. 295). V–106 is treated as a La Plata Period Pyramid Mound site (p. 315).

V–71, *V–255*.—Both of these cemeteries refer to Tomaval and La Plata but not to Estero. V–71 (Huaca Prieta de Guañape) (Quad A–3, southeast) is an early midden site (pp. 41 ff.) with the Tomaval-La Plata cemetery nearby. V–255 (Quad B–5, northwest) has been described as a Tomaval dwelling site (p. 276) and mentioned as a Tomaval cemetery (p. 295). It is also a La Plata cemetery and occupation site.

V–304.—This is a La Plata and Estero cemetery in the Lower Virú-North dune country (Quad B–5, northwest). Collier explored this cemetery and I am indebted to him for a description of it. Evidences of between 30 and 40 old grave excavations were noted within an area 75 by 30 meters. Burials had been made through a thin clay layer into gray sand. Collier found some at a depth of 1 meter or a little more. A low dune, about 75 cm. deep, had drifted in over the burial area since the interments had been made.

V–313.—It has been mentioned that V–313 (Quad F–4, northwest) was a midden site of the Guañape Period (p. 53). The site is a cave in Middle Virú-South, at the outer margin of the Valley near the foot of the Cerro de Huarpe. Here, the drift sand has covered, or almost covered, a number of rock outcrops. The V–313 cave is in one of these granite outcrops, now isolated in a sea of sand. Junius Bird discovered and explored the site.

The cave, or rock shelter, has an opening 5 meters wide and a depth of 3.5 meters. Bird found llama burials in the floor of the cave and more llama burials on the hill-slope immediately below the mouth of the cave. La Plata Period pottery was with these burials. Farther down the slope, and not in immediate association with the llama burials, were the Guañape Period sherds.

The primary purpose of V–313, during the La Plata Period, seems to have been a place of burial, but llama rather than human burial.

V–203, *V–204*.—(See Quad E–1, southeast.) Both of these sites are Puerto Moorin Period house groups in the Huacapongo (see p. 78). La Plata burials had been made in and around them.

V–144, *V–146*.—(See Quad E–1, southeast.) Both of these are hill-side house groups in Huacapongo (see pp. 75–77). V–144 was used as a place for Tomaval and La Plata burials. Pottery found around

V–146, in addition to the Puerto Moorin, included Tomaval, La Plata, Estero, and Colonial types.

TABULAR SUMMARY OF SITE TYPES OF THE LA PLATA PERIOD

Living sites:	
Exposed Dwelling Sites:	
Agglutinated Villages: Irregular Arrangement	7
Semi-isolated Large Houses	1
Compound Villages:	
Rectangular Enclosures	3
Great Rectangular Enclosures (V–171, occupied through La Plata)	1
Dwelling-Construction Mound (earlier mound re-used for burials	1
Midden accumulations	17
Earth-Refuse Mounds	2
Community or ceremonial structures:	
Pyramid Mounds	3
Community Buildings	1
Fortified strongholds or places of refuge:	
Hilltop Platforms	1
Hilltop Agglutinated Village	1
Cemeteries	13

THE ESTERO PERIOD

PERIOD DEFINITION

Estero Period, also treated without subdivisions, is assigned a slightly longer time span than La Plata but not quite so long as Tomaval (Ford, 1949, figs. 4, 5). Ford's marker types are the Inca decorated styles, Cuzco Polychrome and Inca Polychrome. Although only 1 percent of the whole, these polychrome types are consistent in their occurrence. Otherwise, the ceramic complex is very similar to La Plata. Tomaval Plain declines slightly but is still a dominant type and appears in forms identical to those of the La Plata Period.

Estero is presumed to measure the last, brief prehistoric period of Virú, the 60 to 70 years between the conquest of the north coast by the Inca and the arrival of the Spaniards in 1532. This is the Inca, or Inca-Chimu, era of this part of Perú.

SITE DISTRIBUTION

The decline in the number of sites noted in the La Plata Period continues in Estero (fig. 74). The 41 La Plata sites have now dwindled to 18. The Tomaval-La Plata concentration along the coastal strip is still present, though diminished. There are almost no sites in the upper portions of the Lower Valley; the Middle Valley is virtually abandoned; and only a few sites remain in Huacapongo. One of the

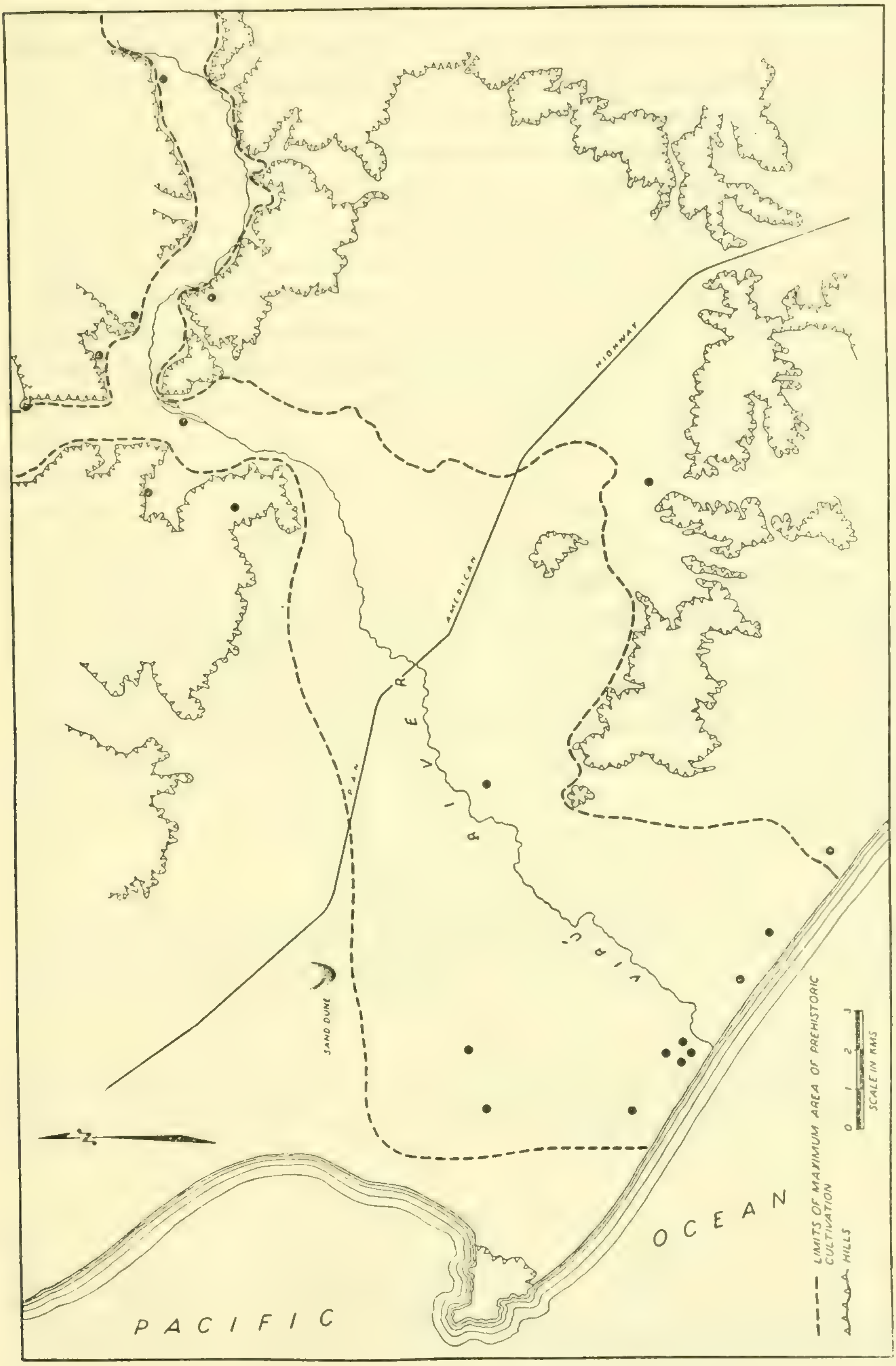
PACIFIC
OCEAN
VIRU RIVER
PAN AMERICAN HIGHWAY
SAND DUNE
N
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
0 1 2 3
SCALE IN KMS

FIGURE 74.—Site distribution map of the Estero Period.

Huacapongo sites, in the upper part of that drainage, is a large compound (V–179) and could represent a drawing together of population. Similarly, V–171, in the upper half of the Lower Valley, is a huge site and could have accounted for a large population group. However, V–171 gives all indications of having been built as early as Tomaval and occupied through La Plata. The massing of population in a few sites still does not seem to be the answer.

It is possible that many sites identified only as La Plata might have been occupied through both La Plata and Estero. Other regions of Perú known to have been conquered by the Inca often show little or no Inca ceramic influence. The absence of Inca-type pottery in some Virú Valley sites could have resulted from factors other than chronological ones. Nevertheless, if we combined the 41 La Plata with the 18 Estero sites, eliminating those which we have already assigned to both periods, the total would be only 45, or about half the number of sites recorded for any of the three pre-La Plata periods.

Another possible line of explanation of site decline lies in the function of sites. It has been noted that ceremonial sites such as Pyramid Mounds, were more common in Gallinazo and Huancaco Periods. Thus, by eliminating ceremonial or community sites from the count, a balance more truly representative of comparative population size may be struck. But even when we do this, the total of the Exposed Dwelling Sites, middens, Earth-Refuse Mounds, and Dwelling-Construction Mounds of these earlier periods by far surpasses the dwelling sites and middens of La Plata and Estero combined. Besides, the Tomaval Period, which also lacks the large numbers of ceremonial sites characterizing Gallinazo and Huancaco, does not show the La Plata-Estero decline in total number of sites.

Nor can we say with certainty that the brevity of the La Plata and Estero Periods is a reason for their limited number of sites. The time estimates given for Huancaco and Tomaval are about as short as the La Plata-Estero span, and these periods (Huancaco and Tomaval) have the greatest number of sites of any.

To summarize, the most satisfactory way to explain the La Plata-Estero decline in total number of sites is to postulate a decline in the population of the Valley.

SUMMARY OF SITE TYPES

The Compound Village is the characteristic Exposed Dwelling Site of the Estero Period. Two Compounds are dated as having been constructed in the Estero Period. These I have named "Rambling Enclosures." V–124 is a tapia and plain brick adobe unit consisting of two attached rectangular enclosures with a walled lagoon in one exterior angle of the attachment. The Rambling Enclosure differs from the Rectangular Enclosure in its greater complexity of outline. It is two or more Rectangular Enclosures conjoined. Site V–179, which is largely a rock-walled construction in the upper Huacapongo, is the other Rambling Enclosure. This is a larger site than V–124, and it consists of three or more Rectangular Enclosures merged together. In addition to this, there are, or were, other attached enclosures which have been damaged by flooding. Both V–124 and V–179 have an inner symmetry of large courts, long, narrow corridors, and small cubicle-like rooms. The over-all symmetry of V–124 is more pronounced than that of V–179. V–179 suggests the Irregular Agglutinated Village but one in which the subunits are not rooms but whole enclosure compounds assembled together without careful plan.

There are no Rectangular Enclosure Compounds attributable to Estero, although site V–123, which is of this type and probably constructed in Tomaval times, seems to have been reoccupied in the Estero Period. Similarly, we have identified no Great Rectangular Enclosures with Estero other than the continued occupation of V–171, another Tomaval construction.

There are no Dwelling-Construction or Earth-Refuse Mounds with an Estero Period dating, but 5 middens date, in part, as Estero.

A single pyramidal mound, the conical adobe and rock-faced V–103, has an Estero pottery component, but it is fairly certain that this is a much earlier mound re-used in Estero times.

The refuge sites, V–212 (Hilltop Platform) and V–61 (Hilltop Agglutinated Village), were occupied or used in this period.

The seven Estero cemeteries are all cemetery areas where other late period graves were found. All but one are near the beach.

EXPOSED DWELLING SITES

Explanatory note.—There are three Exposed Dwelling Sites which, I believe, were largely constructed during the Estero Period. Of these, only V–179 has a ceramic component placed as "time C–B," or Estero Period. The other two have mixed components. Site V–112 shows surface pottery of both Puerto Moorin and Estero. Site V–124 has a Tomaval as well as an Estero component, but I am of the opinion that the site was built in the latter period.

A fourth site, V–123, has a ceramic date of Estero, but a nearby midden heap of the Tomaval Period complicates this dating. For this and other reasons, I am offering a Tomaval date for its construction.

A fifth site, V–171, has abundant Estero ceramic refuse on its surface and in the upper levels of its fill. The foundations of V–171 seem to relate to the Tomaval Period, and Collier has so dated its construction. There is little doubt, however, that the site was occupied continuously through La Plata and Estero Periods.

There are several other sites which have Estero Period pottery collections but which have no structures or clearly visible settlement plans or at which the structures cannot be satisfactorily associated with the Estero component. These are mentioned briefly as "Additional Occupation Sites."

V–123 (*Estero Compound No. 1*).—This adobe-walled Rectangular Enclosure Compound has been described under the Tomaval Period (pp. 261–262).

V–124 (*Estero Compound No. 2*).—Estero Compound No. 2 is in the delta country of the Valley, 200 meters north-northeast of V–123 and about 700 meters inland from the beach (Quad B–5, northwest). There is heavy *monte* growth over the southeastern and northern parts of the site (pl. 44, *bottom*, *left*). Orientation of the building layout is north-northeast by south-southwest, much as is V–123. In our discussions we will treat of the site as if it were laid out on the cardinal directions.

The construction is all of adobe, tapia, and rectangular bricks, and is very well preserved. As with V–123, and other late sites in the Valley, tapia forms the base of the walls with the smaller adobes used for the upper portions. The tapia is carried up to a height of 1.35 to 1.5 meters, and the brick-shaped adobes add another 1 meter or more to this. The highest wall in V–124 still stands 2.9 meters, of which 1.4 meters is tapia. The bases of the outer walls of the site are 2 meters thick. These have a taper or batter of 75 cms. on each face so that the top of the wall is only 50 cms. thick. The brick adobes in V–124 may be mold-made, but I am not sure of this. The most frequent adobe size met with is 35 by 20 by 15 cms. or very minor variations on these measurements. There are also sizes of: 35 by 20 by 20 cms.; 40 by 20 by 18 cms.; and 30 by 20 by 20 cms. An unusually large size, which is not numerous, is 45 by 24 by 18 cms.

V–124 is clearly a planned layout of the Rambling Enclosure Compound type (fig. 75). It consists of two major rectangular portions which have been joined and constructed as a unit. There is also a sunken pit or lagoon in the angle of the joined rectangles and some additional wall constructions.

The main entrance, or what appears to be the main entrance, is situated in the center of the north wall of the northwest rectangle. The gateway is a little over 2 meters wide[52] and is flanked on each

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[52] The map (fig. 75) shows the doorway to be nearer 4 meters wide. This was based upon surface measurements which I made. Later, Collier excavated around the base of gate columns, which had been protected from erosion, and found the actual aperture to be much narrower than I had estimated.

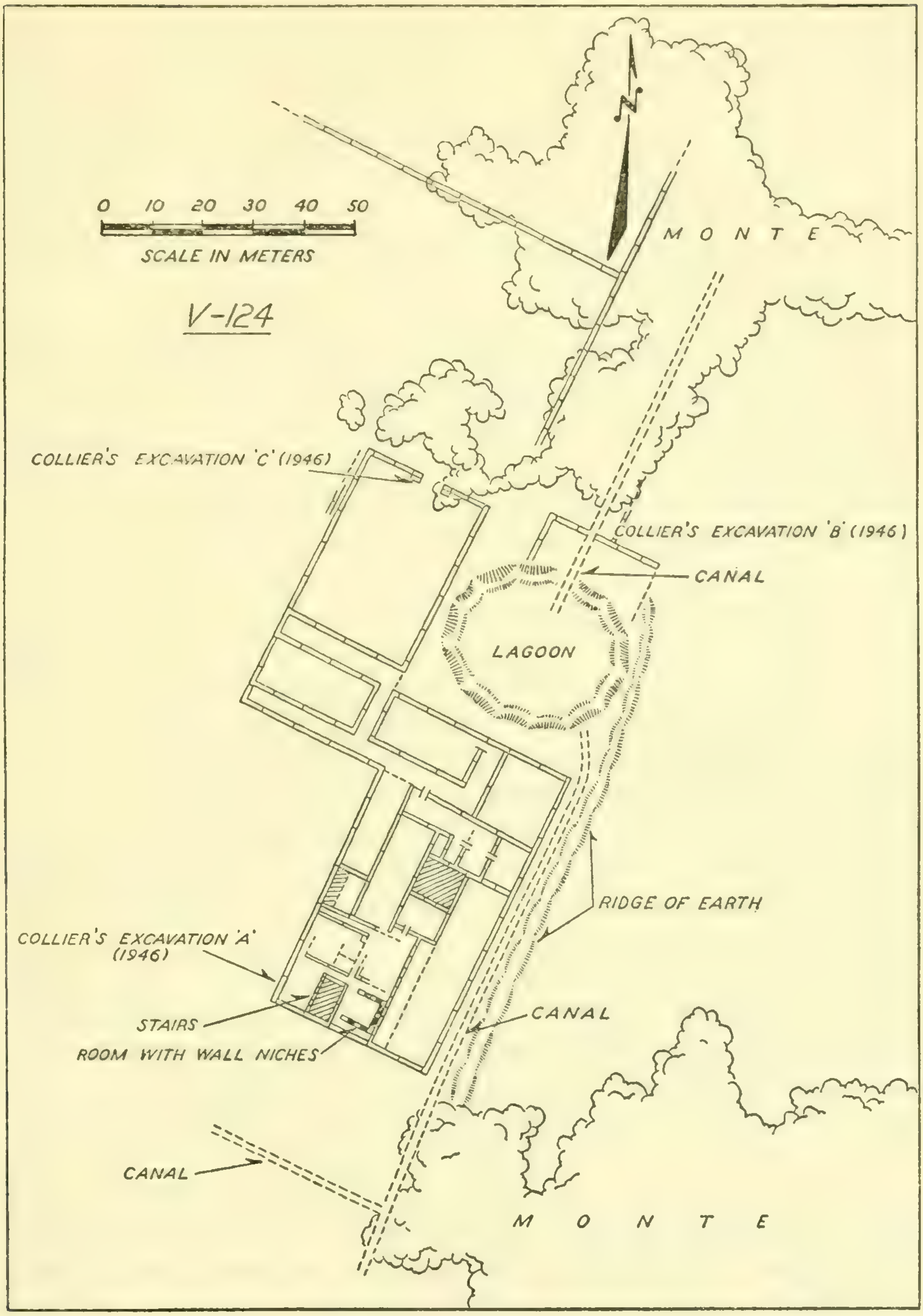
0 10 20 30 40 50
SCALE IN METERS
V-124
MONTE
COLLIER'S EXCAVATION 'C' (1946)
COLLIER'S EXCAVATION 'B' (1946)
CANAL
LAGOON
RIDGE OF EARTH
COLLIER'S EXCAVATION 'A' (1946)
STAIRS
ROOM WITH WALL NICHES
CANAL
CANAL
MONTE

FIGURE 75.—Ground plan of V-124. Heavy *monte* growth covered main ruin in 1946 but is not shown on plan. Estero Period.

side of the interior by massive rectangular columns which are built up against the wall (pl. 44, *center*, *left*). These columns are 2.1 meters wide and 1.5 meters thick. The walls they adjoin are of 1 meter thickness. The column on the west side of the door stands 2.5 meters high and the one on the east side 3 meters. On both, and on the walls which adjoin the columns, the tapia construction goes up to 2 meters which is considerably higher than that noted elsewhere in the site except for a solid platform to be described. Brick-shaped adobes were used above the 2-meter mark. It seems likely that approximately 3 meters was the full and original height of the columns and the walls at this point. No relief decorations were seen on these columns, such as we observed on the gateway columns of V–269, although they may have been destroyed by erosion.

The main, or north, gate opens into a large quadrangle or court, 35 by 26 meters. There are no signs of partitions within this quadrangle. Outside the wall, on the west side, there is a section of another wall paralleling the first. It is separated by a meter or so. This may have been a corridor, or the wall may belong to an earlier building period. It could be traced on the surface for only a few meters. South of the court or quadrangle there is a long, narrow corridor-type room and, then, another large room, 22 by 10.5 meters. This latter room is surrounded by a corridor on three sides, and another room, of about the same size and shape, lies across a corridor, just to the east of it. This last room has a visible doorway, and is separated from a large, nearly square (13 by 15 meters), room by another corridor.

These divisions, the court, the corridors, and the three large rooms, make up the northwestern rectangle and its L-shaped base. Attached to the L–shaped base, and also at right angles to it, but running in the other direction, is the southeast rectangle. This part of the site is 50 by 33 meters and has a more complex interior compartmentalization than the rest of the site.

The southeast rectangle has no doorways leading outside the enclosure but is entered from a door opening off a corridor from the other part of the site. This doorway leads into a small corridor from which open two rooms in consecutive order. These rooms are 5 by 10 and 7 by 10 meters, respectively. There is also a much smaller doorless room adjoining this same corridor. Along the east side of the rectangle there is a long room, 38 by 9.5 meters, and in the northwest quadrant there are two other long, sizable rooms, each over 20 meters in length and 7 or 8 meters wide. In the southwest corner there is a complexity of small rooms and narrow corridors whose wall outlines have eroded or become buried in detritus and are not clearly visible.

At three places in the southeast rectangle there are solid, blocklike platforms. One, near the center of the compound, is 8.5 meters square and over 2 meters high; there is a smaller block along the west wall; and another of intermediate size adjoins the interior of the south wall. This last block or platform and a room adjoining it were excavated by Donald Collier who has provided me with the following information.

The block or platform proved to be of solid tapia, purposefully poured or constructed. It is possible this was a room that was later filled in this manner; or it may have been a part of the original construction of the building. The block measures 5.25 by 7 meters at the base. This does not include the thickness of the south enclosure wall which is another 2 meters wide. The height of the block or platform is 2.9 meters which is a higher construction of pure tapia than any of the walls. There is a definite batter to the sides of the block (pl. 44, *top*, *right*). On the west side there is a stairway (pl. 44, *top*, *left*), 50 cms. wide and consisting of 12 to 14 steps, which ascends to the top of the block in a north to south direction. At the bottom of the stairway is the floor of the southwestern corner room.

Collier's excavation of this platform or block in V–124 reveals its purposefully constructed nature. The solid mass was demonstrated to be more than a trash-filled room. Presumably, it had some functional significance. Was it a base for another or upper room? Was it a lookout or observation post? Or a religious pyramid-platform feature? We cannot answer these questions satisfactorily at this time, but there is now a greater possibility that similar platforms in other late period sites are intentional features.

Collier made other excavations at the south end of the southeastern rectangle of V–124. These were in a room lying on the east side of the platform just discussed. This room has interior floor measurements of 3.4 meters square and is enclosed on only three sides. The west side, or the side nearest the platform, is open, and there is a passage 2 meters wide between the block and the room. This passage connects at right angles with a corridor, 1.2 meters wide, which separates the room in question from the southern enclosure wall.

When the site was first explored by us, I came upon this room half filled with rubbish and partly protected by scrub trees. The rubbish, which was largely melted adobe, almost, but not completely, hid a row of wall niches. The clearing excavations carried down to floor level exposed these niches (pl. 44, *center right*).

The walls in which the niches were made were tapia for a height of 1.35 meters. Above this they were brick-shaped adobes up to about 2.5 meters. There were seven niches in the room: two in the south wall, two in the north wall, and three in the east wall. The bottoms of the niches were 80 cms. above the floor and 1 meter high so that the lintels were a total of 1.8 meters from the floor. These lintels were thick layers of cane reeds, in some places still partially preserved. The niches in the north and south walls and the central niche in the east wall were all 60 cms. wide and 80 cms. deep. They had been plastered on all interior surfaces, and fragments of white paint could still be seen in some of them. The two corner niches in the east wall are larger than the others and L-shaped. Their opening is 60 cms.

wide and of the same height as the others, but they have a depth of 1.2 meters and an interior L-shaped projection of a full meter.

We turn now to associated features outside the walls of the conjoined rectangles. In the exterior angle formed by the two rectangles there is a large depression for a lagoon or water reservoir (pl. 44, *bottom, right*). This lagoon is 2 meters or more below the surrounding ground level and is, today, damp and filled with grass. In effect, it served as a *pukio* to catch subsurface water flowing toward the sea. It is also encircled by unusually heavy bushes. The floor of the lagoon is flat and the sides fairly even. Erosion and the melting of adobes in the adjoining structures may have filled it in to some extent, spoiling its original shape. Possibly, it was cut to be rectangular. Today, it is oval, measuring about 36 by 30 meters. At the north end there is a partial enclosure of a tapia adobe wall, but I could not trace this wall all the way around the lagoon nor could I connect it with the principal buildings. Apparently, the lagoon was fed by a small canal which came in from the north, passed through an aperture in the adobe wall to which we have just referred, and emptied into the depression. Another small canal, probably the overflow outlet, leads out of the depression and along the east side of the main building. This canal is paralleled by a low ridge of earth. The canal flows southward to a point 25 meters below the ruin, and at this point it divides into two parts, one continuing to the south and the other turning sharply westward. We were unable to follow these branches farther, but it is likely that they flowed past V–123 and were eventually used for cultivation plots.

To the northwest of the main buildings of V–124 there are two other tapia adobe walls. One of these runs parallel to the approximate north-south walls of the site, and it probably once connected with these although I could not follow out this connection because of the *monte*. The other wall joins the north-south wall at right angles some 50 meters north of the site enclosures. It goes in a westerly direction for 60 meters or so, but its further continuations or connections have been obliterated by time. These walls may have been parts of Great Rectangular Enclosure Compounds, similar to V–246 or V–171, but there is hardly sufficient evidence left to prove this.

Ford and I found no surface pottery on V–124 whatsoever. Sherds were not abundant at the site, but Collier's digging turned up some fragments which had been buried in the hard mud of the disintegrating structures or included in the room fills. Collier states specifically (personal communication, 1951) that the sherds from above the floors in V–124 are Estero Period. This is particularly true of his excavations at the south end of the site. At the extreme northern end of the site, in what he (Collier) has termed V–124B, there was a small deposit of Tomaval Period pottery in the fill around a low tapia wall. La Plata, the period intervening between Tomaval and Estero, is not assigned to the site by Collier.

Clearly, the dating of V–124 is not resolved, although we can be fairly certain that the buildings are no earlier than the Tomaval Period. It is possible that both V–123 (pp. 261–262) and V–124 were built in Tomaval times and then reoccupied in the Estero Period. The architectural layout of V–123 coincides with this belief a little better than the V–124 layout. Where V–123 resembles, closely, the ground plan of the Tomaval Period site, V–297 (p. 257), V–124 has more in common with the Estero site, V–179 (see below). This does not, of course, deny resemblances between V–124 and V–123 or V–297. At the present stage of investigation we are unable to be sure of these period identifications of architectural and ground-plan types, and the evidence for various correlations is not all one way or the other. I will, tentatively, venture an Estero date for the building of V–124 but admit the reasonable possibility of a Tomaval or La Plata date.

V–179.—V–179 is a Rambling Enclosure Compound in upper Huacapongo-North (Quad F–2, northeast). It is located on the Valley bottom on land which in 1946 was partially under cultivation. The total area of the site is about 150 meters in diameter. Sixty meters to the west-southwest of V–179 there is another site unit of similar appearance and size. This second site is not, however, as well preserved as V–179. As shown on the map (fig. 76), the two sites were connected by a rock wall, probably a defensive construction.

V–179 can be traced in its stone foundations which are walls made of river-worn boulders, abundant mud mortar, and small rock rubble fill. These walls very from 70 cms. to 1.5 meters in width. They are double-faced, and the masonry is cyclopean. In a few places adobes are superimposed on the stone wall foundations. Apparently, the upper portions of the walls were made of rectangular adobes.

The room and courtyard patterning of V–179 is extremely complex, as can be seen from the map (fig. 76). The pattern is difficult to describe, but the site seems to follow a plan of several large, conjoined quadrangles. Small interior room divisions are not common but do occur. There are several long, corridorlike rooms or passages, a number of long, wide banquettes, and small, raised platforms.

The largest quadrangle or enclosure is 43 by 40 meters, and within these dimensions there is one large corner room (19 by 9 meters), some other poorly defined walls which might have been room partitions, banquettes, and two platforms. One of these platforms adjoins outside of the wall of the large corner room while the other is isolated from any wall. The first platform is 8 by 4 meters and the second,

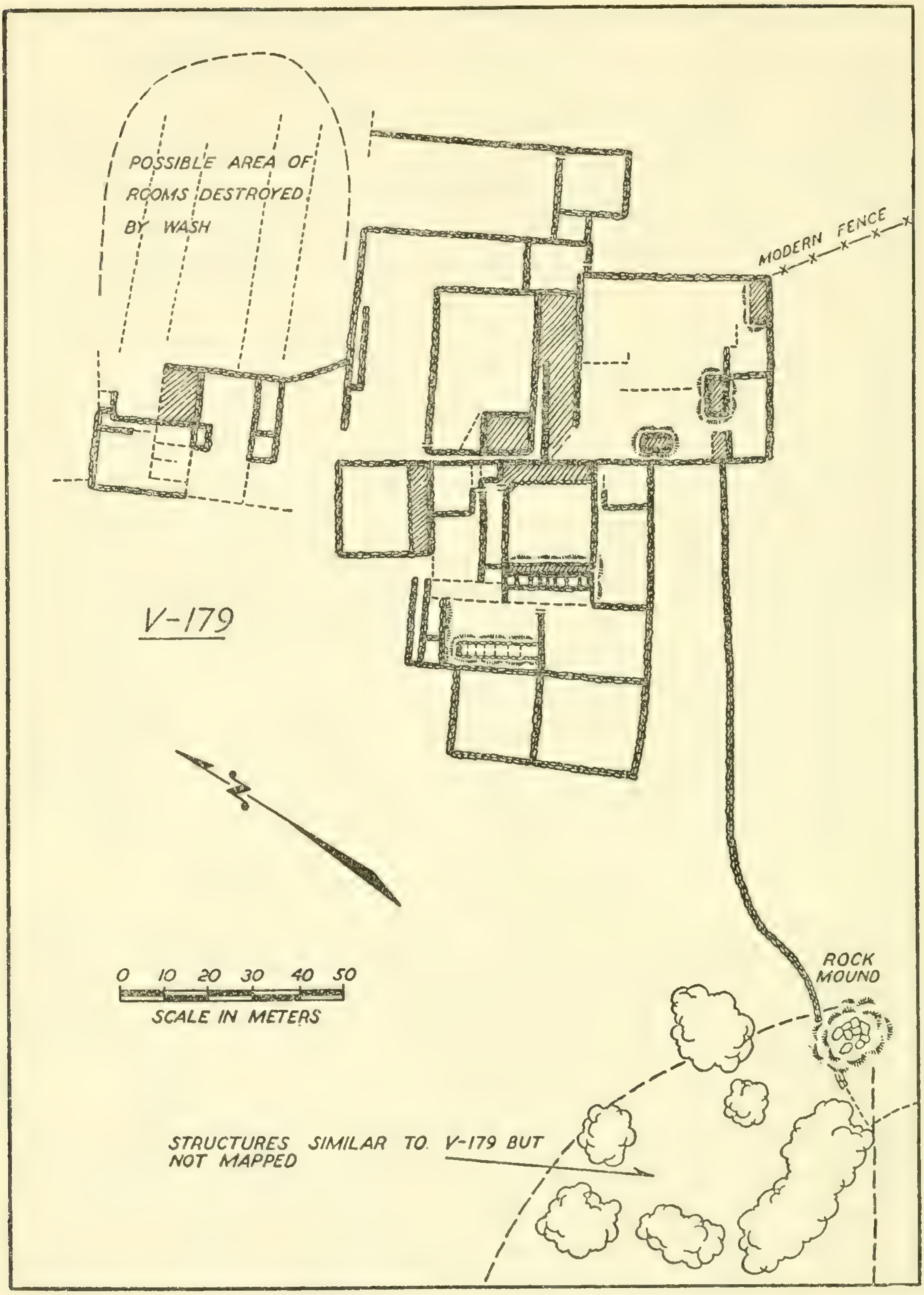
POSSIBLE AREA OF ROOMS DESTROYED BY WASH
MODERN FENCE
V-179
0 10 20 30 40 50
SCALE IN METERS
ROCK MOUND
STRUCTURES SIMILAR TO V-179 BUT NOT MAPPED

FIGURE 76.—Ground plan of V-179. Estero Period.

6 by 3 meters. Neither is more than 1 meter high. Both are faced with stone foundations.

The largest quadrangle is connected with other sections of the site by a double corridor with a raised or banquette-type floor. Adjoining this is another rectangular compound, 35 by 22.5 meters. This compound has a large corner room with a raised or platform floor, 50 cms.

high. The compound is flanked on two sides by a large, L-shaped enclosure which opens on the north side. A series of other rooms lie off to the north and east of this. These last are smaller compartments, and may have been dwellings.

The western or southwestern section of the site consists of several large, more or less square, compartments. Twenty by twenty meters is an average size for these. In two of these there are raised ridgelike platforms capped with the foundations of small, cell-like rooms. I counted 7 rooms on one ridge and 8 on the other. The rooms average about 2 by 3 meters. In one of the rooms I found several classic Cuzco Polychrome sherds.

Ford's large (285 sherds) collection from all parts of the site is dated as Estero and has an excellent rating.

V–112 (Rinconada sites).—This is one of the Rinconada sites in the desert at the foot of the hills south of Cerro Bitín (Quad D–5, northeast).

The pattern of the site is difficult to trace. Evidences of stone foundations are found over an area 200 meters in diameter. The foundation walls, small sections of which can be seen here and there, are as much as 1 meter wide, double-faced, and with a core fill of small rock rubble. There is not enough stone on the ground to account for complete construction in this material, and the upper portions of buildings were probably of adobe.

There is a large pottery collection from the site which dates as Estero Period (excellent rating). A very small collection has an Early Puerto Moorin date (poor rating).

Additional occupation sites.—The following sites show Estero Period sherd refuse but either lack structures or the observable structures cannot be dated solely as Estero:

V–17
V–119
V–253
V–256
V–286

V–17 (Queneto Temple) yielded a surface collection of 217 sherds which Ford dated as La Plata and Estero (excellent rating) and another of 48 sherds which he dated as Estero (excellent rating). It is unlikely, however, that the temple was constructed in these periods (see pp. 338 ff.).

V–119 (Quad C–6, northwest) is a beach dune midden with Tomaval, La Plata, and Estero refuse. V–253 (Quad B–4, northwest), also a beach dune midden and cemetery, dates as Tomaval-La Plata-Estero. V–256 (Quad B–5, northwest) is in the beach country near the delta. It has been described as a dwelling site of the Tomaval Period (p. 277), but the few building remains on the site could date from anywhere in the Tomaval to Estero interval. The site is also a cemetery for these periods.

V–286 (see Quad B–4, northwest) is a series of *pukio* irrigation cribs in Lower Virú-North. Refuse from Tomaval through Colonial times is present.

PYRAMID MOUNDS

V–103 (*Huaca San Juan, No. 2*).—This mound is believed to have been built in the Early Puerto Moorin Period (see p. 82) and to have been only casually re-used in Estero times. It is in the fields opposite the mouth of Queneto quebrada (Quad E–2, northwest).

Ford's Estero Period collection from the mound numbers 112 sherds (rating: poor).

FORTIFIED SITES

V–61.—(See Quad D–2, northeast.) This is a defensible dwelling site on a high summit bordering the north side of the Valley. It was described under the Tomaval Period (pp. 290 ff.). Stratigraphy at the site runs from Tomaval through Estero.

V–212.—(See Quad E–2, northeast.) This is a defensible series of house platforms and foundations atop a peak in Huacapongo-South. They were described for the Puerto Moorin Period (p. 99), but the site shows refuse from succeeding Tomaval, La Plata, Estero, and Colonial occupations.

CEMETERIES

Explanatory note.—There are seven stations which served as Estero Period burying grounds. None of these are unmixed sites.

V–106
V–120
V–122
V–146
V–253
V–256
V–304

V–106, *V–120*, *V–122*, *V–253*, *V–256.*—These are all multiple period cemeteries of the Tomaval-La Plata-Estero range. All except V–106 are described for the Tomaval Period (see pp. 293 ff.). V–106, a mound used as a cemetery, is described for the La Plata Period (pp. 315 ff.).

V–146.—(See Quad E–1, southeast.) This is a dwelling group in Huacapongo-North built in Puerto Moorin (Early) times (p. 77). It was used as a cemetery from Tomaval through the Colonial Periods.

V–304.—(See Quad B–5, northwest.) This is a La Plata and Estero cemetery in beach dune country. It is described under the La Plata Period (p. 319).

TABULAR SUMMARY OF SITE TYPES OF THE ESTERO PERIOD

Living sites:	
Exposed Dwelling Sites:	
Agglutinated Villages: Irregular Arrangement (dubious example)	1
Compound Villages:	
Rectangular Enclosure (V–123, probably occupied in Estero)	1
Great Rectangular Enclosures (V–171, occupied through Estero)	1
Rambling Enclosures	2
Midden accumulations	5
Community or ceremonial structures: Pyramid Mounds (re-use of earlier structures)	1
Fortified strongholds or places of refuge:	
Hilltop Platforms	1
Hilltop Agglutinated Village	1
Cemeteries	7

SITES OF QUESTIONABLE DATE

INTRODUCTORY NOTE

After reviewing the Virú prehistoric sites under the various period headings we are left with a residue of sites which are of highly dubious or unknown date. In some instances this doubt results from the complete absence of pottery at the site or our inability to find ceramic materials on the surface. Occasionally, we have been able, on the basis of structural form or immediate associations, to suggest period datings. This has been done in the site descriptions below. There are other sites, however, where no reasonable guesses are possible. Besides sites from which we have no ceramic collections, some have yielded pottery for which, in view of the nature of the structural remains, period dates are highly suspect.

On the site distribution maps for each period, "Sites of Questionable Date" have been entered when a ceramic collection, or other ceramic information, has been available for the period in question even though the chronological placement of the structural remains at the site is in doubt. In these cases (such as V–17) the site has been listed in the text, under the appropriate period, as an "Additional Occupation Site."

EXPOSED DWELLING SITES

V–56.—This site is in Queneto quebrada (pl. 56, *center*), up from the mouth on the southwest side (Quad E–2, northwest). It is composed of an Irregular Agglutinated unit of about 11 rooms plus a smaller separate building which may have had 2 or 3 rooms (see map, fig. 22). The walls are of double-faced masonry and from 60 to 70 cms. in width. Several very large boulders were noted in the walls, some at corners and others at the sides of possible doorways. Most of the rooms are rectangular, although there are three small ones which are not. The largest rectangular room is 11 by 7.5 meters, and the small rooms are 5 by 4 meters. One small room has a raised or platform floor. Another room, or double-room, has a banquette feature along one wall.

V–56 seems to be one of a group with V–39, V–40, V–41 and V–42. These sites are all Late Gallinazo or Huancaco Period dwellings. V–43, which is nearby, also dates as Late Gallinazo.

V–57.—(See Quad E–2, northwest.) There is a rock-walled site near the southwestern side of the Queneto quebrada floor which consists of one partly destroyed, Semi-isolated Large House and a few other miscellaneous wall foundations. One room is 10.5 by 6 meters and a smaller room is 4 meters square. The building is situated diagonally with reference to an old road which crossed the quebrada floor. The size and shape of the building and this arrangement with relation to the road resemble site V–43 which is some 60 meters distant (see map, fig. 22). V–43 dates as Late Gallinazo Period.

V–48.—Near the southwestern corner of the mouth of Queneto quebrada there is a cluster of five rock-walled, Semi-isolated Large House foundations (Quad E–2, northwest). The houses lie within a radius of 30 meters, but are arranged without any particular pattern of orientation (see map, fig. 39). The individual buildings are, or were, one-, two-, and three-room affairs. All are rectangular. The one-room building is 12 by 7 meters and has a corner entrance. The two-room building has rooms of equal size (5 by 7.5 meters). The larger building has two large and one smaller room.

I will venture either a Huancaco or Tomaval date for this group.

V–55.—There is a small Irregular Agglutinated rock-walled village unit lying between the ancient road and one of the prehistoric canals in the lower central section of the Queneto quebrada floor (Quad E–2, northwest). The main unit has four or five rooms (see map, fig. 22). The largest room is 7.5 by 7 meters and has a central doorway. The other rooms are all less than 5 meters square, and their conjoined arrangement is irregular. There is a second detached unit which may have consisted of four or five very small rooms.

The site appears to block the course of the upper canal, although this may not have been the case. The water could have been channeled in or around it.

I would guess that this building dates from the Tomaval or Huancaco Periods.

V–58.—This is a rock-foundation Irregular Agglutinated terrace house group on the hill overlooking Queneto quebrada from the southwest (Quad E–2, northwest) (fig. 39). The group is composed of 20 or more rooms. It appears as if a rectangular compound, 35 by 15 meters, had been constructed with the long axis running up and down slope. This rectangle was then divided into oblong or square rooms on the different terrace levels. Attached to the rectangle, on its southwest side, are more rooms which look as though they had been added later. These rooms are less carefully squared, and their arrangement follows the contours of the hill.

The nearness and similarity to site V–46, which is La Plata Period, suggest a La Plata Period dating.

V–207.—This site is on the Valley bottom, in cultivated land, on the south side of the Huacapongo River (Quad E–2, northeast). We noted two rock-walled rectangular foundations of about the same size. The westernmost unit measured 25 by 26 meters. Near the center of its southeast wall is a platform of earth and rock 50 cms. high and 5 meters square.

We found no pottery, and I would not hazard a guess in dating this building.

V–224.—(See Quad F–2, northeast.) V–224 is on the floor of a small ravine or quebrada adjacent to the Tomaval Period site, V–223 (see pp. 274–276). It is a stone construction of three large rooms (see map, fig. 66). The rooms vary from 28 by 18 to 20 by 16 meters. Within the largest room is a raised platform of earth which is partially faced with stones. The site is now used as a modern cemetery. Perhaps its construction is modern, although the walls are very similar to those of the neighboring V–223 and other Virú Valley prehistoric sites.

We found no pottery on the site.

V–79.—At the southern end of the hill of Bitín there is a rock-walled Rectangular Enclosure Compound situated on the southwest face of a terminal spur (Quad D–4, southeast). The site is about 30 meters above the floor of the desert. The fortified enclosure of the Puerto Moorin Period, V–80 (pp. 92 ff.), is a kilometer to the north on the crown of Bitín. V–81, a La Plata Period mound and adobe compound (pp. 312 ff.), is below on the pampa, 600 meters to the west.

The V–79 rectangle is 34 by 27.5 meters (fig. 77). The outer walls are made of large boulders and are 1 meter, or slightly more, in width; the interior walls are narrower. Inside the enclosure, at two or three places, old digging has disclosed partition walls made, at least partly, of adobes. These adobes are rectangular, plain, and probably moldmade. I measured two of them as 31 by 18 by 11 and 36 by 19 by 12 cms.

The entrance to the compound is slightly off center on the southeast side. The gateway is wide (4 meters) and below the entrance there is a stone-paved ledge or terrace. Within the first chamber is a narrow (4 meters) corridor running crosswise the full width of the building. Crossing this corridor, one may enter either through a door into a sizable (11 by 8 meters) room or pass on through a narrow, short corridor into another long crosswise corridor. There are some

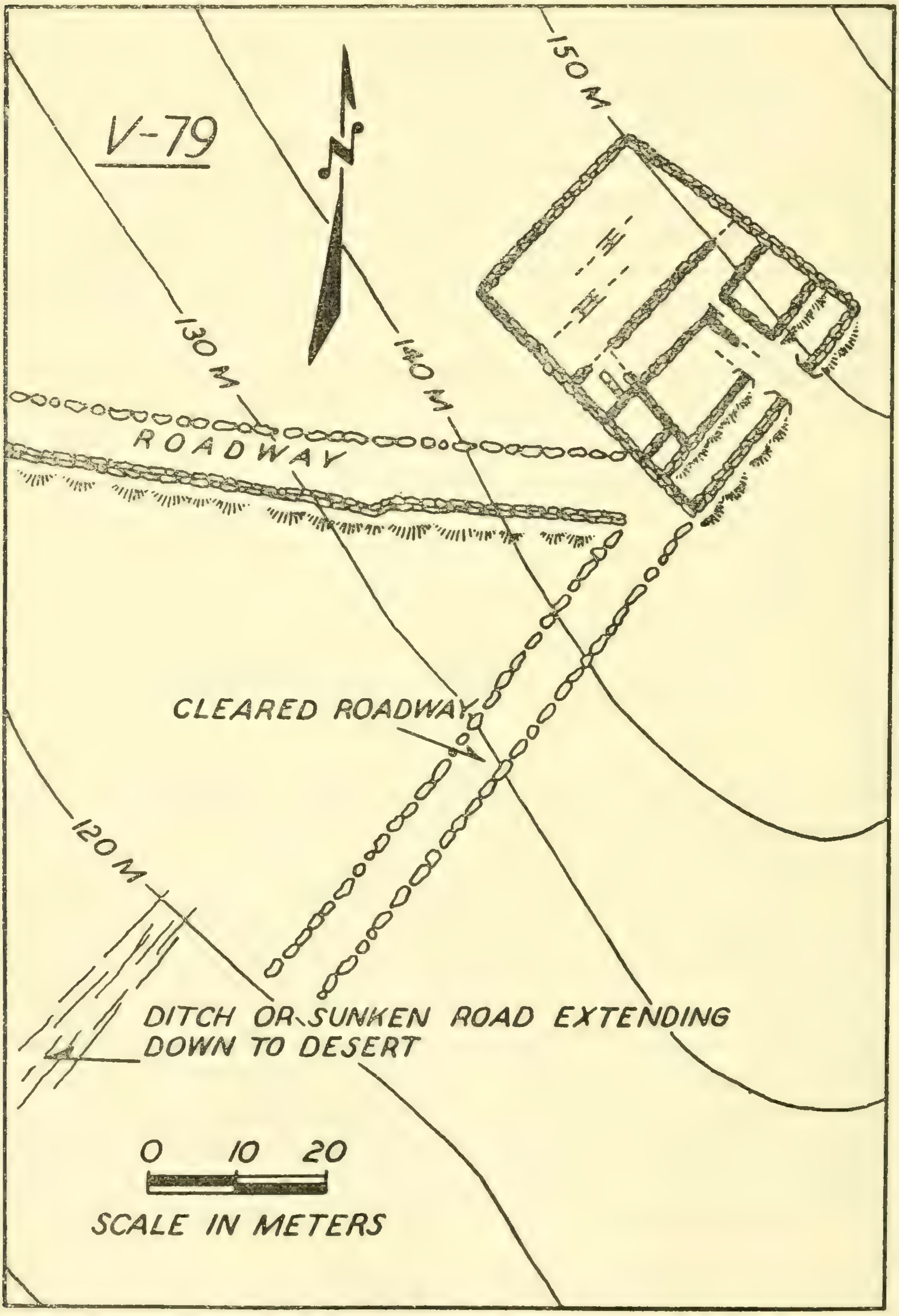
V-79
150 M
130 M
140 M
120 M
ROADWAY
CLEARED ROADWAY
DITCH OR SUNKEN ROAD EXTENDING DOWN TO DESERT
0 10 20
SCALE IN METERS

FIGURE 77.—Ground plan of V–79. Site on slope of Cerro Bitín and approached by two roadways. Not dated.

small rooms in the building (4 by 2.5 and 3 by 5 meters), and the whole northwestern half of the quadrangle (which shows few divisions on the map, fig. 77) was probably subdivided into a number of rooms. The terrain is steep, so the various corridors and rooms are built upon levels, one rising above the other.

I have considered the site as simply a dwelling unit, built on the hill, perhaps for security. However, there are unusually impressive roadways which lead up to it. One of these ascends the steep face of the spur (pl. 55, *top*). It is 5 meters wide, slightly raised, and lined with rows of large stones rather than a wall. The road runs for 70 meters, beginning in the sands at the foot of the hill and terminating at the south corner of the V–79 building. A second road approaches from the west on a relatively gentle incline. It is a feat of greater road-building than the first, having been cut as a ledge, 4 to 6 meters wide, into the side of the hill. On the upper side there is a row of boulders, but the lower side has a retaining wall built to support the fill of the road ledge. Like the first road, it begins on the desert floor and terminates at the south corner of the V–79 enclosure.

There is a curious feature near the site which may, or may not, be related to it. This is a deep (1 meter), wide (4 or 5 meters) canallike road or groove cut into the sand of the desert. One end of it ascends to the lower slopes of Bitín, stopping at just about the point where the first Bitín Temple road begins (see map, fig. 77). The two are not, however, in alinement and fail to connect by about 10 meters. The sunken or canallike road extends in a straight line to the southwest for 500 meters, ending in the *monte.* At this point, it was either discontinued, or has been filled by sands. On examining the air photographs, one notes a second and similar sunken road approximately paralleling the first at a distance of 750 meters to the northwest. This second sunken road also begins part way up the lower, sandy slopes of Cerro Bitín and runs down slope across the desert for several hundred meters before it, too, disappears.

One or two large sherds were seen in the V–79 compound, and these may have come from graves which had been made in the site, although this is not certain. I could not definitely identify these sherds, but I have the impression that they belong to the later periods.

MIDDEN SITES

There are two refuse area sites, without any structural remains, for which we have no reliable ceramic evidence. V–115 (Quad C–6, northwest) is a shell midden on one of the upper beach lines of Lower Virú-South. The beach line in question is marked by a ridge of sand and pulverized shell about 1 meter high and 5 to 10 meters wide. This ridge extends along the beach for several kilometers. At the V–115 location there is a distribution of shell, but few sherds, for 100 meters both above and below the beach line. From this it would appear that the old beach was not an active shore line at the time of site occupation.

V–268 is another shell midden. It is in the dunes of Lower Virú-North (Quad B–4, southwest), and the area of occupation is relatively small, being about 40 meters in diameter. Pottery was present on the site, and I am of the opinion that the site falls somewhere in the last three periods of the Valley's prehistory.

EARTH-REFUSE MOUNDS

The site V–243 is in the Santa Elena district of Lower Virú-North (Quad C–3, southwest). It is a small mound, 1.6 meters high, in the midst of cultivated fields. There were a few sherds on the surface, but we did not make a collection.

Site V–254, in Lower Virú-North (Quad B–4, southwest), is one of the small mounds of the Gallinazo Group. It lies 20 meters northwest of V–252. The mound stands 1.7 meters above the plain and is oval in shape, being 18 by 13 meters. I put down a test trench, 6 by 2 meters, just below the mound summit on the northeast side. The cut proceeded through organically stained clay for 1 meter's depth without revealing any features or potsherds. It was obvious, too, that the section of the mound in which we were digging had been cut through and churned up by treasure hunters. The excavation was abandoned.

COMMUNITY BUILDINGS

V–17 (*Queneto Temple*).—Queneto Temple, located on the quebrada floor of the Queneto, or San Juan, quebrada (Quad D–1, southeast) is the most controversial site in Virú. Larco Hoyle has described and mapped it (Larco Hoyle, 1938–39, vol. 1, p. 12); Bennett (1939, pp. 22–27) visited the temple, taking several measurements and describing the buildings and monoliths; and Horkheimer (1944, p. 78) gives a brief account. My map (fig. 78) is from an air photo projection and some ground measurements. It should be noted that the walls of the enclosures, as I have drawn them symbolically to represent facings and fill, are proportionally too wide. Further, in comparing my map with the Larco map, there are several differences. One of these is concerned with the entryway between enclosure or Plaza A and Plaza B. Another is the shape of Plaza C. In general, I am of the opinion that Larco's map, made with instruments and by an engineer, is more likely to be correct in detail than is mine. Otherwise, the discrepancies are minor. In measurements, there is some variation among Larco, Bennett, and myself. This is due mainly to the fact that my readings were chained from midpoints on the walls whereas those authors cite interior or exterior dimensions.

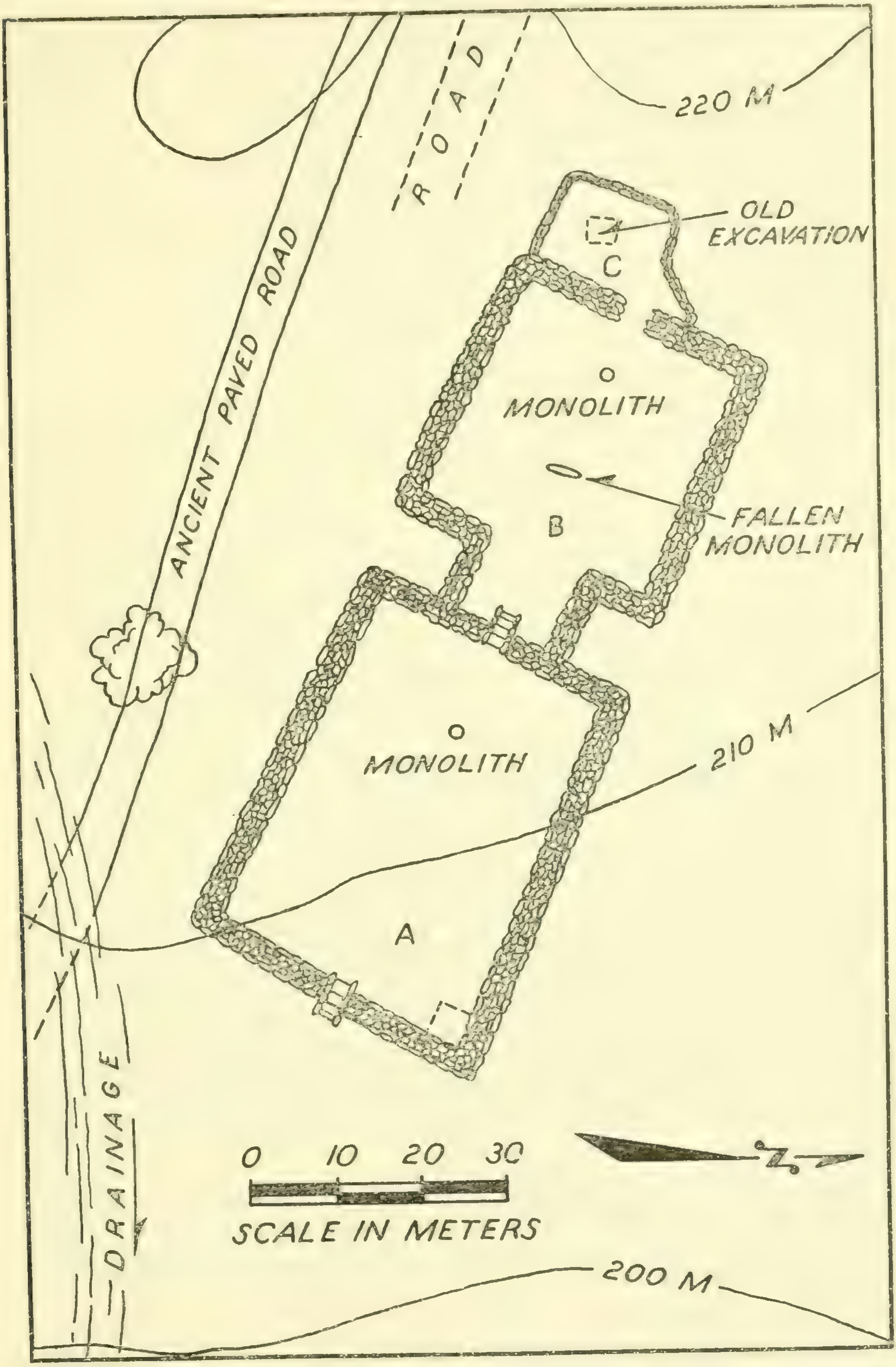
220 M
ROAD
OLD EXCAVATION
C
MONOLITH
ANCIENT PAVED ROAD
FALLEN MONOLITH
B
MONOLITH
210 M
A
DRAINAGE
0 10 20 30
SCALE IN METERS
N
200 M

FIGURE 78.—Ground plan of Queneto Temple (V–17). Dating questionable.

The Queneto Temple is set on a sloping ground surface and is constructed in three levels. The level of the base of Plaza B is 2.25 meters[53] above the base level of Plaza A. Plaza C, a small enclosure at the west end of the building, is a meter or so higher than B. The walls of both Plazas A and B are massive. Those in A are 2.7 meters wide, and those of B are only slightly narrower. The technique of wall construction in both is double-faced with rubble fill. For Plaza A, large stones, averaging 50 cms. in diameter, are used as wall facing with considerable small rubble fill between the facings. In Plaza B, the facing stones, placed on end, are huge, irregular-shaped slabs, from 1 to 3 meters high and from 0.5 to 1 meter wide. The slabs facing on the interior are somewhat larger than those on the exterior. Boulders are used as rubble fill in the relatively small central crevice of the walls.

My measurements on Plaza A, taken from midpoint to midpoint on the walls, are 45 by 34 meters. For the upper plaza, B, similar measurements are 31 by 31 meters. There is an entryway between A and B, which is on the higher level of B, that I measured as 14 meters wide and 10 meters deep. Again, these are measurements from midpoints of walls, not interiors, which would be less. I mapped Plaza C as being irregular in shape. It has maximum dimensions of 10 by 20 meters, and its walls are quite ordinary, narrow (less than 1 meter) double-faced stone constructions of waterworn boulders.

Plaza A is entered from the center of the southeast wall by a narrow (1.7 meters interior measurement) portal. The entrance is set with stone steps leading from the open quebrada floor into the enclosure. The door aperture between Plazas A and B is also 1.7 meters wide, and is stepped. Here, the ascent is steeper than in the Plaza A entrance. The gateway into Plaza C lies on a line with the other two gateways and is about the same width. It has no prepared steps, however. On the line of the three gateways there are three monoliths, two standing and one fallen. The standing monolith in Plaza A is 10 meters from the entrance into Plaza B. The fallen monolith in B is 18 meters from the Plaza B interior side of the same gateway. The standing monolith in B (pl. 56, *top*) is 12 meters from the fallen one. The monoliths are between 2 and 3 meters high and average about 1 meter and 50 cms. in width and breadth.

The floors of all the plazas are relatively free of loose rock. Bennett (1939, p. 24), who excavated in these plazas, reports that the floors were originally built up and leveled with stones and then covered with earth.

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[53] This is Larco's figure. Bennett says between 3 and 3.5 meters. Larco's cross-sectional plan shows Plaza C to be on the same level with Plaza B; Bennett estimates C to be 1.25 meters higher than B. I recall Plaza C as being higher than B.

In the northeast corner of Plaza A there is a small cubiclelike room about 3 by 3 meters. These foundations are not very clearly seen.

On the southwest side of the building there are two ancient paved roads passing within a few meters of the temple. One of them is very well preserved and is 6 meters wide.

Larco Hoyle (1938–39, vol. 1, pp. 14–19) is of the opinion that Plaza B was constructed before Plaza A, but that both of them are earlier than the Mochica (Huancaco) Period of the Valley's history. In fact, he feels that Queneto Temple, and particularly Plaza B, goes back to an early "Época Inicial de la Ceramica" (Larco Hoyle, 1948, pp. 13–14), a period antecedent to our Guañape but subsequent to the preceramic Cerro Prieto. Larco describes a ceramic type for this early period (Larco Hoyle, 1948, p. 14). This type is characterized by thick, crude, unpolished, oxidized ware and very small olla-shaped pots. This is the same pottery which Bennett (1939, p. 24) excavated in the sandy floor of Plaza C. The vessels were found in two nests or caches at a depth of 20 cms. Bennett attached little importance to these finds at the time.

In addition to the crude ware excavated in Plaza C, Bennett picked up Late Chimu (La Plata) and Early Chimu (Huancaco) potsherds on all three plazas. The Early Chimu style was particularly well represented in fragments of a figurine-jar type.

Ford's two collections from V–17, gathered from all parts of the temple and numbering 217 and 48 sherds, respectively, date as La Plata-Estero and Estero. Both are rated as excellent.

I do not believe that the site can be satisfactorily dated from any of these collections, and, lacking a series of sites of comparable architecture for cross-checking, I hesitate to advance any definite date. It seems unlikely, though, that the temple could be later than Huancaco. There are no other sites nearby in this upper end of the quebrada, and the chances of appreciable numbers of Huancaco (Early Chimu or Mochica) modeled figurine vessels being scattered on this spot prior to the building of the temple are not great. I am inclined to agree with Larco Hoyle that the building is early, although I do not see that there is sufficient substantiatory evidence to place it on a pre-Cupisnique or pre-Guañape time level.

The architecture does not help much in a chronological placement. The walls of Plaza A differ from other stone foundations in Virú only by being thicker and more carefully built. Plaza C walls are identical with Virú walls of all periods. The construction of Plaza B is the most unique, as Larco Hoyle has pointed out. Kroeber (1944, p. 71) has suggested that the alinements of natural massive slab boulders have a similarity to Cerro Sechín, in the Casma Valley. Such a parallel tends to strengthen an early date for Queneto as Cerro Sechín is undoubtedly close to the Chavín horizon in time; but the distinctive Sechín style of carving is not present at the Virú megalithic site. Kroeber also called attention to the fact that the pair of stone-covered pyramids on the Valley floor near the mouth of the Queneto quebrada (sites V–77 and V–103) are straight in front of the temple and visible from it (they are about 2 kilometers distant). "There may well have been a connection," he states, "although not necessarily in time: a sanctuary may remain such through changes of culture" (Kroeber, 1944, p. 71). V–77 has a Gallinazo dating (see p. 136), although its construction may have been begun in Puerto Moorin times. V–103 was undoubtedly built in the Puerto Moorin Period, although it was reoccupied by the Estero peoples (see p. 82).

Kroeber's concept of a sacred shrine or sanctuary, venerated by peoples of successive cultures, may explain the confusion of dating surrounding Queneto Temple. An early temple or sacred place could well have been used by Huancaco, La Plata, and Estero worshipers. The rather specialized collection of Early Chimu figurine jars at the temple suggests votive offerings as do the caches of little crude ware jars which Bennett found in Plaza C.

SITES OF COLONIAL DATE

When we embarked upon the Virú site survey both Ford and I had hopes that a Colonial Period would be defined from the ceramic collections. It is known, for example, that a glazed pottery, following in the old Inca and Chimu vessel-form traditions, was made on the north coast in early Colonial times (Larco Hoyle, 1948, pp. 58–60). Subsequent to this, native pottery continued to be produced, and ceramics are made and sold in Trujillo markets today. Our survey collections in Virú reveal very little of this post-Spanish material. At only one site did we find it in any abundance; elsewhere, it appeared in a few places in trivial amounts.

The Colonial pottery which we found in Virú was not described by Ford; nor do the seriation charts take it into account, although he did allow for it in his time segmentations (see "time B–A," Ford, 1949, fig. 4). I cannot, therefore, offer any synoptic definition of this Colonial ware which we found other than to say that it was either glazed or wheel-made pottery of a sort no longer commonly in use in the area.

Site V–23 yielded the most Colonial pottery. It is a rock-walled Rectangular Enclosure Compound in Huacapongo-North near the Corral gate (Quad E–1, southeast). The rectangle is 28 by 27 meters fig. 38). There are three large rooms or divisions. Two of these are in the southern half of the site and are separated from each other by a corridor. The rooms measure 15 by 11 and 13 by 12 meters.

The corridor which separates them is L-shaped and is 4 meters wide. The northern half of the building is 28 by 12 meters. It has a wide banquette and a small raised platform (3 by 1 meters) on one corner of the banquette. There is a small room partitioned off at the end of the banquette, and in the corner opposite the banquette there is another room, 5 by 5 meters.

The compound lies south of a major wall, one of a series in Huacapongo-North. Attached to the wall is an unnumbered site or building which is also in neat, quadrangular form. We have no ceramic information from it.

V–23 has a small pottery component of the Early Puerto Moorin Period, and a large collection of Colonial ware. As the site is unlike any of the dwellings or buildings of Puerto Moorin, it probably dates from the Colonial Period. It is certain that the site is not recent. Present-day houses of the Huacapongo are largely wattle-and-daub structures. There are houses of a more permanent type in Virú Pueblo, but the foundation patterns of these which have been made available to me by Dr. Allan R. Holmberg (personal communication, 1951) are much smaller and of a simpler arrangement than V–23.

The other sites with Colonial pottery are V–146, V–212, and V–286. The first is an Agglutinated Village in Huacapongo-North that dates from an earlier period. Apparently, the site had been used for burials in the late prehistoric and Colonial Periods. The second is a Hilltop Platform fortified site or lookout station. It was first used in Puerto Moorin times and re-used in the late prehistoric and Colonial Periods. Site V–286 is a series of *pukio*, or subsurface, cultivation cribs in the Lower Valley. Tomaval and later pottery, including Colonial, was found in the area.

THE DEVELOPMENT OF VIRÚ SETTLEMENTS: A RECONSTRUCTION

DWELLINGS

The dwelling sites of the preceramic Cerro Prieto Period are patterns of small, conjoined rooms. The extent of these room clusters is not known. Perhaps they are small, separate buildings of two or three rooms each, or they may be agglutinations of a great many rooms. The earliest houses, believed to be subterranean, were lined with rectangular hand-made adobes. Following this, surface rooms were constructed out of tapia poured in thin walls. The midden refuse sites of Cerro Prieto are large (200 meters in diameter), deep, but compact accumulations. The adobe houses to which we have just referred were found in one of these midden hills, but they occupied only a small area of the midden. It is possible that other shelters or huts made of wood, cane, or wattle-and-daub materials have left no traces in the refuse.

The dwellings of the Early phase of the succeeding Guañape Period may have been similar to those of Cerro Prieto. Some of the same midden sites continued to be occupied, although no definite architectural evidences of dwellings have been disclosed in these. It is not until the Late phase of Guañape that a complete settlement plan is known. This type of Late Guañape site is the Scattered Small-House Village, of which we have two examples for the period. From 10 to 30 houses are spaced at random and without noticeable orientation over an area 100 to 300 meters in diameter. The individual houses have from one to six rooms with one or two rooms being the most usual number. Rooms average 3 meters in diameter and are rectangular, rounded, or C-shaped. The foundations of the buildings were of small, unworked stone set in mud mortar. It is likely that the walls were of adobe and the roofs of wooden beams and thatch. A pottery vessel of the Cupisnique culture of the Chicama Valley, a culture and period believed to be similar to and contemporaneous with Guañape, depicts a rectangular, presumably one-room, house with a gabled roof (pl. 58, *top*, *left*) (see also, Larco Hoyle, 1946, pl. 61b). Bands of engraved cross-hatching on the roof may indicate a cane-woven or mat roof; an engraved rectangle in the center of one end wall probably represents a door; but there is nothing to portray either stone-masonry or adobe walls.

It is not known if the Agglutinated Village type was present in the Guañape Period. The Cerro Prieto conjoined rooms suggest that this sort of community may have been in existence in this earlier period, and, if so, it is likely that it was retained through Guañape times as it appears also in the Puerto Moorin Period.

Small Guañape Period midden sites, without structural remains, are known from the lower levels of several of the Earth-Refuse Mounds of the Valley bottoms. The type of dwelling here is unknown.

The Scattered Small-House Village type is seen in three sites of the Puerto Moorin Period. Two of these are identical with the Late Guañape Scattered Small-House Villages, and the third differs only in that it is built upon a terraced slope rather than on flat ground.

The important new community type in Puerto Moorin is the Irregular Agglutinated Village of which we have 13 examples. The Agglutinated site, as the name implies, is a conjoined clustering of rooms or houses. Its appearance is not so much that of multiroomed building as it is a random conjunction of houses or room units. There is no compound enclosure wall. The "irregularity" of the agglutination refers to the haphazard room arrangement, apparently without overall plan and certainly without symmetry. The area of the average Irregular Agglutinated site is considerably less than that of the Scattered Small-House Village, but the number of rooms or living quarters is the same, or, in some cases, greater. Twenty-five rooms is an average number, and individual rooms are about the same size as those of the Scattered Small Houses. As a concession to conjoined construction, room shape is usually rectangular, either square or oblong, but rooms with rounded corners do occur. Most of the Irregular Agglutinated Villages are known from rock-walled foundations, but conjoined-room adobe structures were the rule in sites near the coast. These last were built of conical or odontiform adobes.

The Irregular Agglutinated Villages are most commonly single agglutinations, more or less isolated from other sites. There is one Puerto Moorin site, however, which has a Scattered Small-House arrangement, plus an agglutinated cluster, all within a relatively small area. Perhaps this is a transitional type, and the Irregular Agglutinated site of the Puerto Moorin Period may be a development out of the Scattered Small-House Village. If such is the case, it is evident that the size of the community has not changed appreciably, but has become architecturally more compact.

One other major site type, the Rectangular Enclosure Compound, is also recorded for Puerto Moorin. This is an aggregation of rooms or compartments within walls which define a rectangular area. The Puerto Moorin site in question has an enclosure measuring about 30 by 20 meters and within is divided into 15 rooms. These rooms are small and irregularly arranged within the confines of the enclosure. The site is a stone-masonry structure.

House superstructure for Puerto Moorin is largely conjectural, although there are a few ceramic representations of this time period from the north coast which offer clues (Larco Hoyle, 1944, p. 9; 1946, pl. 66, *c*). One of these is rectangular, walled on three sides, and has a single-sloped roof. The walls are semiopen in that they are made of stepped blocks with corresponding apertures. The roof is supported by the rear wall, a single center post, and frontal cross beam. Wooden roof timbers are indicated, but there is no sure indication of the building material of the walls (pl. 58, *top*, *right*). The other vessel is surmounted by a circular, flat-roofed house. These walls are also built up in a series of stepped columns with intervening apertures, and around the upper portion of the building there is an open intertwined motif which may have been meant to suggest woven canes. The vessel spout occupies the center of the house floor, extending through the roof, and it may be meant to signify a center support post.

Although both vessels depict single houses, this is no proof that conjoined houses or Agglutinated Villages were not used by the Puerto Moorins. The buildings represented might be individual structures of a Scattered Small-House Village; but the same architectural types could, also, with some modifications, have been parts of agglutinated sites. Room clusters would have been much more difficult to portray in a pottery medium. It is, of course, possible that the two Puerto Moorin vessels under discussion were temples or special buildings rather than ordinary houses. Even so, it is a reasonable supposition that temple and common house structures had a number of features in common at this period.

Puerto Moorin Period middens are numerous. Some of them are extensive (300 or 400 meters) areas on the sandy plains at the sides of the Valley. The deposits seem to be shallow. Others are Earth-Refuse Mounds or rubbish strata found beneath Earth-Refuse Mounds and structures of later periods.

In the Gallinazo Period, particularly the Early and Middle phases of that period, dwelling sites were mostly in the Lower Valley bottoms. Many of these were Agglutinated Villages of adobe rooms, although we have described them under two classes of sites, Dwelling-Construction Mounds and Pyramid-Dwelling-Construction Complexes. The Dwelling-Construction Mounds are, to all appearances, multiple-room living sites found superimposed, one level upon another. The Pyramid-Dwelling-Construction Complexes are similar living sites but have pyramidal mounds of probable politico-religious implication in association. In Late Gallinazo there are 13

Dwelling-Construction Mounds and 12 of the Pyramid-Dwelling-Construction Mounds. Most of these sites are in the Gallinazo Group, a concentration of habitations and mounds on the north side of the river in the Lower Valley. Most of these same sites were occupied during the Early and Middle Gallinazo phases, although the Pyramid Mound feature in the Pyramid-Dwelling-Construction Complex may not have been added until the Late subperiod. The patterning of the sites is definitely agglutinative. In some cases, there may have been a regularity of arrangement, possibly around large courts; but other groups of rooms appear to be very irregularly conjoined. As yet, sufficient areas of rooms have not been excavated to be sure of anything more than the tight "honeycomb" clustering of the rooms.

The size of the sites varies tremendously. There are some small Dwelling-Construction Mounds of about 15 meters diameter which could have contained only a few rooms. In contrast, the dwelling area of the Gallinazo site, proper, is 400 by 200 meters and contained many room divisions. Reviewing the 8 largest Gallinazo Group sites, both Dwelling-Construction Mounds and Pyramid-Dwelling-Construction Complexes, Bennett (1950, pp. 68–69) estimates a total of 30,000 top level or Late phase rooms within an area no more than 5 kilometers square. Bennett (1950, pp. 106–07) is of the opinion that the Early phase sites were smaller clusters, containing only a few rooms and that the huge agglutinations did not appear until Late Gallinazo.

The rooms were rectangular and small in all phases, ranging from 1.25 meters square to 3 by 4 meters. In the Early and Middle phases they are windowless and doorless, apparently with roof entrances. Doors are found in Late phase rooms, and corridors often separate rooms in this subperiod.

Wall width varied from 30 to 60 cm., and tapia, ball, rectangular cane-marked, and rectangular plain adobes were used with a tendency for a chronological order as given. The earlier rectangular adobes were large (48 by 30 by 17 cm.), but the later ones average much smaller (31 by 25 by 16 cm.).

The exposed or unburied Gallinazo sites of the upper sections of the Valley all belong to the Late phase. Of the Agglutinated sites, four are irregular, one regular, and two may be either regular or irregular. The irregular units have from 30 to 100 rooms. The Regular Agglutinated site has about 20 small rooms and some corridors, all symmetrically arranged around a large room. There are also two Rectangular Enclosure Compounds. Both of these are terraced sites, and the enclosures are relatively small. The interior room arrangements are not clearly defined. A new dwelling site type is also recorded for Gallinazo. This is the Semi-isolated Large-House, of which there are three. These are rectangular, stone-foundation buildings of good size (approximately 14 by 9, and 11 by 7 meters) which contain one or two large rooms and may have small closetlike interior rooms or attachments. Those of the Gallinazo Period are separated from each other or from Agglutinated sites of the same period by 100 to 200 meters.

All of the aforementioned exposed sites, with one exception, are seen only as rock-wall foundations. In some cases, there are rectangular cane-marked adobes superimposed upon the stone foundations. These adobes are of both the large and small size described for the Gallinazo Group sites. The one exception, mentioned above, is a conjoined group of rooms made of wedge-shaped and rectangular cane-marked adobes. This site is still sufficiently "exposed" so that the rooms can be traced without excavation.

House superstructures are illustrated in Gallinazo plain and negative painted pottery (see Larco Hoyle, 1945 b, pp. 13–14). These representations are double jars with strap handle and single spout. The houses are mounted on the tops of the unspouted sides, and a number of forms are depicted. There is a single-sloped roof with a back wall and two supporting front posts (pl. 58, *center*, *left*). A slightly more complex rectangular building has three sides, an open front, a single-sloped roof, and side windows of stepped form. There is also the rectangular house with a gabled roof, an open side, and the stepped-shaped side windows (pl. 58, *center*, *right*). Then there are a number of closed buildings. All of these have a rectangular floor plan, and usually show only one room, although some have two. These have simple gabled roofs (pl. 58, *bottom*, *left*); divided roofs in which the front portion is flat and the back half single-sloped, leaving an opening between (pl. 58, *bottom*, *right*); and roofs which slope in two or more planes (pl. 59, *center*, *left* and *right*). Doorways located near the corners of the houses at ground level are indicated in some of the representations. Very often, there is a crudely modeled, free-standing figure of a human being standing or seated within the house. Some of the roofs have scalloped edges (pl. 59, *top*, *left*, *right*) which could have been meant to simulate logs or timbers, but the walls bear no markings suggestive of either adobe or stone. As with the house pots of the earlier periods, these Gallinazo effigies appear to be single houses, and they may be counterparts of the real-life Semi-isolated Large Houses. It seems unlikely that any of these are meant to portray the "honeycomb" agglutinations of the Gallinazo Group sites. Individual gabled roofs could have possibly, but not conveniently, been constructed over some of the conjoined rooms.

Both extensive and deep middens are attributed to the Gallinazo Period, and the Earth-Refuse Mounds of the Lower and Middle Valley are more numerous than at any time before or later.

Huancaco dwelling sites are probably similar to some of those of the Gallinazo Period. For Huancaco sites in the Lower Valley we lack the excavational data that is available for the sites of the Gallinazo Group; and so we are not absolutely sure that the great agglutinated clusters of adobe rooms were still constructed and still in use. Around the area of the Gallinazo Group they, apparently, were not; but there are adobe Dwelling-Construction Mounds and Pyramid-Dwelling-Construction Complexes of Huancaco date which compare favorably in size with those of Late Gallinazo. One such Huancaco Pyramid-Dwelling-Construction Complex is an adobe mass or platform 300 by 200 meters in extent and probably contains conjoined, criblike rooms now buried. In the upper part of the Valley there are more Huancaco dwelling sites than there were for Gallinazo. Ten of these are the Irregular Agglutinated Villages; three are Regular Agglutinated; and there is one definite Rectangular Enclosure Compound. The Irregular Agglutinated sites are of much the same size and appearance as they were in the Gallinazo Period. The two Regular Agglutinated units have some rooms which are considerably larger than those in the Gallinazo rock-walled, Upper Valley sites. One of these units has a symmetrical arrangement around a possible large courtyard. The compound site is larger than any of the earlier compounds, being 90 by 40 meters. It has a large interior open space or court taking up half of the site area. The five Semi-isolated Large Houses of the Huancaco Period are of the same size and type as those of Late Gallinazo.

Occasionally, adobes are found in some of the rock-walled sites of the upper part of the Valley; and, of course, the probable dwelling-construction sites of the Lower Valley are of adobe. The Huancaco adobe type is commonly rectangular and plain.

Pottery representations of houses of the Mochica culture (Huancaco Period) are a commonplace. Like the earlier periods, they depict individual houses, not clusters; and, in general, they are much like those of the Gallinazo Period. Bennett (1946, pl. 30, *g*, from Schmidt, 1929) shows one which is rectangular, has a gabled roof covering the front part of the house, and a single-sloped roof in the opposite plane over the back of the house. It has a corner doorway. Another type is rectangular, gabled, with windows in the gables, and has a large central doorway (pl. 60, *top*, *right*). Stepped roof combs embellish the ridge pole at opposite ends (see Bennett, 1946, pl. 30 *b*, from Schmidt, 1929), and there are paintings of water jars by the door and serpentlike monsters on the roof. A simpler type has a single-sloped roof, three vertical sides, and a leaning front wall with side openings. Another seems to be a gabled roof supported by four short corner posts and two tall center posts with a cross beam. There is little or nothing indicated in the way of building materials.

Huancaco middens in Virú are sometimes extensive, but do not appear to be of any great depth. In the same way, numerous Earth-Refuse Mounds of the preceding Gallinazo Period were occupied; but, to judge from the depth of the rubbish, for a very short time.

Our Tomaval Period dwelling sites are, largely, in the upper regions of the Valley where we have more exposed, rock-foundation sites than we do for the previous periods. There are 26 Irregular Agglutinated Villages. These remain essentially in the tradition of Gallinazo and Huancaco. Sites range from 10 to 100 or more rooms. There are more large rooms in these Tomaval sites than characterize those of the earlier periods, and the average size of the ordinary rooms is somewhat greater (5 by 10 meters). The rooms tend to be oblong more often than square, but as this is particularly true of the terraced slope sites it may be an adaptation to the terrain. There are no Regular Agglutinated sites, but there are nine definite and three possible Rectangular Enclosure Compounds. These compound sites fall into two subtypes. One is small (e. g., 22 by 17 meters) with small or medium-sized rooms arranged without evidence of particular plan; the other is larger (e. g., 52 by 38 meters) and has symmetrical interior arrangements of courts, corridors, medium-sized, and small rooms. There are 17 Semi-isolated Large Houses. They tend to be larger than those of the two previous periods, in some cases being over 20 meters in each dimension. Otherwise, they are similar to their Gallinazo or Huancaco prototypes.

There is a spectacular site type which appears for the first time in this period, at least in a definite form. This is the Great Rectangular Enclosure Compound. These are huge enclosures surrounded by massive walls. Some are as large as 130 meters square. Interior compartmentalization is uncommon in these enclosures, and few of the divisions are as small as those in the individual dwellings or living rooms of the other compound or the agglutinated sites. Their function is debatable. They have a possible, but not a clear-cut, prototype in the semienclosures or wall systems attached to a few of the Pyramid-Dwelling-Construction Complexes of the Huancaco Period.

Building materials for the Upper Valley sites of the Tomaval Period were stone and adobe. Only the stone foundations are left in most sites, but small, plain, rectangular adobes were found occasionally, indicating adobe superstructures. Most of the larger rectangular compound sites are in the lower part of the Valley, and these are made of adobe. The walls are thick tapia at the base with plain rectangular adobes forming the upper sections. It is questionable as to whether these last are hand-made or mold-made. The Great Rectangular Enclosure Compounds are all walled with tapia adobe.

There are a few earlier Dwelling-Construction Mounds which show Tomaval Period refuse, but the occupation of these old Gallinazo and Huancaco sites was relatively trivial at this later date. For Gallinazo, certainly, and for Huancaco, probably, we can count the Dwelling-Construction Mounds and the Pyramid-Dwelling-Construction Complexes as Agglutinated type villages. For Tomaval, we can no longer do this. Similarly, the occupation of Earth-Refuse Mounds by the Tomaval peoples was mostly a reoccupation of old sites. Most of the other midden sites which date as Tomaval are on the Valley margins or near the seacoast. Some are quite large, but, like those of the Huancaco Period, they are thin.

The trends seen in the Tomaval Period carry through the succeeding La Plata and Estero Periods. La Plata dwelling sites include seven Irregular Agglutinated Villages, one Semi-isolated Large House, three Rectangular Enclosures, and one Great Rectangular Enclosure. The Agglutinated Villages are rock-walled sites of the upper part of the Valley which are, in every way, like those of the Tomaval Period; and the Semi-isolated Large House is also of a pattern with those of the previous period. La Plata compound-type sites are both adobe-walled and rock-walled. One of the latter construction is a cluster of several separate small compounds. The two adobe-walled sites are large and have symmetrical interior arrangements of courtyards, corridors, and rooms. The Great Rectangular Enclosure site is one of those built in Tomaval Period but intensely occupied through the La Plata Period.

The few identifiable Estero Period dwelling sites include one possible Irregular Agglutinated Village, one Rectangular Compound, the continued occupation of the Great Rectangular Enclosure Compound of Tomaval-La Plata times, and two sites of the Rambling Enclosure type. These last are conjoined Rectangular Enclosures. Each enclosure has a planned arrangement of courts, corridors, and smaller rooms. The Rambling Enclosure appears to be an elaboration and enlargement of the simpler Rectangular Enclosure Compound.

In neither La Plata nor Estero are Dwelling-Construction Mounds or Earth-Refuse Mounds significantly used or occupied. Middens of the two periods, like those of Tomaval, are marginal to the Valley bottoms and are of no great depth.

The main trends in Virú dwellings are these: In Cerro Prieto they made conjoined room structures of thin tapia or hand-made adobes. These sites may have been an assemblage of Scattered Small Houses, or they may have been agglutinations of several rooms. In the latter part of the Guañape Period there are Scattered Small-House Villages of small, rectangular or rounded houses of few rooms. Foundations of stone were surmounted by conical, hand-made adobes. Puerto Moorin sees a continuation of the Scattered Small-House Village, but it is being replaced by the Irregular Agglutinated Village. There is also one small Rectangular Enclosure Compound with small, irregularly arranged interior rooms. What evidence we have for adobes in this period indicates conicals, subconicals, or odontiforms.

The predominant village pattern in Gallinazo is the Agglutinate, and it is probable that most of these agglutinations of houses or rooms were irregularly arranged. In the Lower Valley these are seen in the Dwelling-Construction Mounds and the larger Pyramid-Dwelling-Construction Complexes. In the Upper Valley margins there were Irregular and Regular Agglutinated Villages, two small Rectangular Enclosure Compounds of the sort that appeared in Puerto Moorin, and a few Semi-isolated Large Houses. Gallinazo was a period of experimentation in adobe types. In its earlier phases, tapia adobe and various hand-made forms (balls, wedges, etc.) were employed; later, the rectangular, mold-made cane-marked and plain types came into use.

The Agglutinated Village of adobe construction, revealed in the Gallinazo Dwelling-Construction Mounds and the Pyramid-Dwelling-Construction Complexes, is quite probably a common settlement type of the Huancaco Period. There may have been some decline in sites of this type in the Lower Valley in favor of the Agglutinated settlements in the upper parts of the Valley; however, the number of Huancaco Dwelling-Construction Mounds which we counted would imply a continued popularity. The upper drainage Irregular and Regular Agglutinated sites are the same as those of Gallinazo. There is one large Rectangular Enclosure Compound, and this is the earliest appearance of this subtype in Virú. Semi-isolated Large Houses are also recorded for Huancaco. Huancaco adobes are all rectangular, mold-made, and mostly plain.

In the Tomaval Period the Dwelling-Construction Mound and the Pyramid-Dwelling-Construction Complex disappear except as locations of superficial occupation. This means that the adobe-walled Agglutinated dwelling cluster is no longer constructed in the Lower Valley. However, in the upper sections of the Valley the Irregular Agglutinated Village is still popular. These are much like the Upper Valley Gallinazo and Huancaco Period sites except that there is a tendency for the rooms to be larger. Semi-isolated Large Houses are common now, but are larger than previously. The Compound site comes into great prominence for the first time. There are Rectangular Enclosure Compounds with symmetrical interior arrangements of rooms, courtyards, and corridors, and some of these contain small mounds or platforms. The plain rectangular adobe type of the Huancaco Period continues, although it may, at times, be hand- rather than mold-made. This type of adobe was used for the upper portions of walls with either stone foundations (Upper Valley) or massive tapia foundations (Lower Valley). Besides the Rectangular Enclosures, three Great Rectangular Enclosure sites were built in this period. These are huge, essentially empty, adobe-walled enclosures. In the succeeding La Plata and Estero Periods the Irregular Agglutinated and the Semi-isolated Large House sites disappear, but the compound site remains. At least one of the Great Enclosure Compounds of the Tomaval Period is occupied throughout both of the later periods. In the Estero Period a new variable on the Compound site is seen in the Rambling Enclosure which has the appearance of two or more Rectangular Enclosures fused together into a sort of multi-compound arrangement. The plain rectangular adobes used in conjunction with massive tapia walls characterize La Plata and Estero.

In this summary of dwelling site trends there arises the question of continuity of development as distinct from extra-Valley influence. Both were probably operative, although it is difficult to gauge the strength of the one against the other. In the early Scattered Small House Villages there were occasional houses of five or six rooms. This shows the beginnings of the agglutinative tendency in dwelling construction which was later to mount to the accumulated "honeycomb" room patterns of the Gallinazo Period. Late in the Gallinazo Period there is a modification of the agglutinated pattern in what appears to be an attempt at order or symmetry in room arrangement. This modification is expressed in the subtype, Regular Agglutinated, as opposed to the Irregular Agglutinated Village. To this point, we have traced small houses of few rooms into larger agglutinated clusters of many rooms in which there appears a late tendency for orderliness of arrangement. It is not known with certainty if this sequence is repeated elsewhere in Perú, but there are some indications that it is. Such a development could, however, have gone on in parallel fashion, at a number of different places, without specific diffusion. Similar changes in society, its numbers and organization, might have had a similar effect.

There is, however, a strong probability that a new Compound settlement type was introduced into Virú with the advent of the Tomaval Period. This probability is strengthened by the changes in ceramics also ushered in with Tomaval (Ford, 1949, pp. 66–67). It may be that the idea of conjoined rooms or dwelling units within an enclosure wall was an old Peruvian-wide idea, existing as a minor alternative from early periods, as it did in Virú; but the elaboration and formalization of the idea most likely took place within one region and from there spread elsewhere. I suggest that the large enclosures with the symmetrically laid-out interiors were brought into Virú by the forces of the "Tiahuanaco" invasion. This new dwelling-site type existed side by side with the Agglutinated type for awhile, but the latter gradually decreased to virtually disappear in the Estero Period. Meanwhile, a tendency is shown for the Rectangular Compounds to become more complex and develop into the Rambling Enclosure Compounds.

POLITICO-RELIGIOUS STRUCTURES

The interpretation of a building or monument as a "politico-religious structure" is largely a subjective judgment. The assumption is that buildings or edifices which are of unusual size and shape, differing markedly from what appear to be dwellings, may have functioned as temples or palaces. Such an assumption is open to challenge, but it is supported by parallel architectural differentiation in other societies and cultures of the world, by early historical accounts of such buildings in Perú, and by pottery representations of the Mochica and other prehistoric north-coast cultures.

We have no data on special buildings for the earliest Virú period, the Cerro Prieto. In Middle and Late Guañape there are four large (up to 54 by 24 meters) rectangular stone foundations which might have served as "Community Buildings." These were, apparently, walled with conical adobes laid upon stone foundations, and they have few or no interior partitions. That is about all that we can say about them. They may be functionally related to the Queneto Temple, although this latter building has certain interior features, such as the monoliths, which these simple rectangles lack. The only other possible public, as opposed to private, structures of the Guañape Period are the small hillcrest artificial platforms.

In the succeeding Puerto Moorin Period there is a possible continuity of the empty, rectangular Community Building in two large stone foundations of this type in one Puerto Moorin site; but, as these did not occur in other Puerto Moorin sites, the case for continuity is, accordingly, weakened.

There are 14 Pyramidal Mounds in Virú which may date from the Puerto Moorin Period, mostly from its Early phase. These are made, variously, of earth and rocks, conical adobes covered with rocks, or tapia adobe. They are rectangular, flat-topped edifices of substantial size. They stand isolated rather than in groups. On some are vague evidences of the foundations of summit buildings. There is some question as to whether or not these mounds actually date this early. Doubt is thrown on the dating in that all but one mound have mixed period ceramic components. The case is strengthened, however, by the presence of identical mounds within the Hilltop Redoubt sites of pure Puerto Moorin date. Weighing the evidence, I favor a Puerto Moorin date for these mounds or, at least, part of them. A possible continuity might be traced out of the hillcrest platforms of Guañape, but this hilltop platform type of site continues on through the Puerto Moorin Period as distinct from the Pyramid Mounds. The evidence, as we now see it in Virú, certainly suggests an introduction of the rectangular, flat-topped mound in the Puerto Moorin Period. Presumably, these mounds were used as bases for temples or chiefs' houses.

Gallinazo has a strong continuity of the rectangular pyramid mound idea. Most of the Gallinazo mounds are made of adobe. They seem to be more common in the Late phase when they were constructed of cane-marked or plain rectangular adobes, but there is one in our series which dates from the Early phase and, probably, is made of tapia adobe. Pyramid Mounds are developed to their greatest size in the Pyramid-Dwelling-Construction Complexes of Late Gallinazo, where the largest is 25 meters high. What appears to be a very late Gallinazo trend is the construction of a big pyramidal mound, or mounds, with only a few dwelling-construction clusters nearby as in contrast with the Pyramid-Dwelling-Construction Complexes of many associated habitation units. Adobe pyramids are also incorporated in the Castillo Fortification Complexes of the Gallinazo Period. This must be a direct continuation of the idea of the platform mound within the walled hilltop fortification that was begun in the Puerto Moorin redoubts.

Two pottery vessels of the Gallinazo culture may represent buildings on top of the flat-topped mounds. One is a rectangular building, with a flat roof and two rectangular-column central supports, which may be on a mound platform (pl. 59, *bottom left*). The building is open at the front and closed on the other three sides. The columns and what may be the mound sides are decorated with an interlocking fish design.[54] The other is a rectangular house with a gabled foreroof and a single-sloped back roof surmounting what may be a terraced mound (pl. 59, *bottom*, *right*). A pathway, indicated by a groove in the surface of the vessel, ascends, zigzag fashion, from one terrace level to the other, terminating near the door of the house. Possibly, this is only a dwelling, not a special building on a mound, but the zigzag ramp approach is duplicated, in reality, in the terraced adobe mound of the Napo (V–68) Castillo Fortification Complex (see pl. 24, *center*).

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[54] The ware (red) and decoration (white painting in incised lines) of this vessel suggest Puerto Moorin, but the fish designs are very similar to those illustrated by Bennett (1950, fig. 4) from a wall at the Gallinazo site, proper. This vessel is in the Peabody Museum, Harvard University (Cat. No. 46-77-30/4912).

The Community Building theme is suggested in Gallinazo by two architectural types. One is the large courtyard with mosaic adobe frescoes that is found in some of the Pyramid-Dwelling-Construction Complexes. The other is the large room that sometimes is seen in conjunction with, or attached to, the adobe pyramids in the castillo fortifications.

The Pyramid Mounds of Huancaco are about like those of Gallinazo and the continuity is obvious. Most of them are rectangular, but there are two circular structures. Some of the mounds are made of rectangular plain or cane adobes, and these date, purely, as Huancaco. Others are earth-rock mounds. The Huancaco Pyramid-Dwelling-Construction Complexes, are obviously, similar to those of Late Gallinazo; however, there are two new and significant developments noted in the Huancaco Period in connection with these complex Pyramid-Mound sites. Both of these are seen at the Huancaco site, proper (V–88–89). Although classed as a Pyramid-Dwelling-Construction Complex, the "dwelling" features of V–88–89 are unlike those of the earlier Huaca Gallinazo (V–59) or similar sites. Instead of close-packed, small, dwelling-type rooms, the Huancaco site is an aggregation of large rooms, courts, and corridors. Because of this, it suggests a palace or administrative center rather than a clustering of living quarters. The other new development is the appearance of attached enclosures or systems of extensive walls. These appear in connection with V–88–89 (see V–90, 91), and also with another Huancaco Period site, V–149.

Terraced pyramidal mounds are well illustrated in Mochica style pottery (see Means, 1931, figs. 17, 18). Some may represent circular mounds; at least the vessels themselves are circular. These depict gabled houses on a mound summit that are approached by a zigzag ramp (pl. 60, *center*, *right*), as with the Gallinazo style vessel. Others have a stepped, double-zigzag ramp ascent (pl. 60, *center*, *left*). One specimen has no summit building but is topped by a pedestallike throne (pl. 60, *bottom*, *right*).[55] The ramp spirals around the mound to the summit. Still another representation is a rectangular mound of five terraces on which the ascent, from terrace to terrace, is at the corner (pl. 60, *bottom*, *left*).[56]

The Community Building idea crops up in Huancaco in two possible ways. First, there are what we have called the Community

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[55] The pedestal-throne is reminiscent of the adobe throne on the top of the Huancaco Period adobe mound V–92 (see pl. 29, *bottom*, *center*).

[56] This corner type ascent is partially duplicated by the mound in V–88–89 (see fig. 44).

Buildings, proper. These are the large (52 by 37 meters) rectangles, seen in stone foundations, which date from this period. These enclosures are without interior partitions. Two are located near dwelling sites, and one is at the foot of the Castillo de Tomaval (V–51), but outside of the Castillo Fortification Complex. Second, the large "palace-type" rooms or courtyards of the Huancaco site could have served as public buildings or gathering places.

In Tomaval, the Pyramid Mounds are mostly earth and rock structures located in the middle and upper sections of the Valley. These mounds are of a size and shape with those of the Puerto Moorin and Huancaco Periods. In fact, many are the same mounds. The question of dating is again raised. Are these Tomaval structures, or are they Puerto Moorin Period mounds re-used, and possibly rebuilt, in the Tomaval Period? As has been made clear throughout this report, this question cannot be satisfactorily answered now, but I favor the interpretation of Tomaval re-use. The virtual absence of indubitable Tomaval Period mounds in the Lower Valley argues against their frequent construction for the period. Some mounds were, undoubtedly, built in Tomaval times, but I do not believe that Tomaval was a great mound-building period, at least not in the Virú Valley.

The idea of a mound within a walled enclosure becomes clearly established in this period. There is one site like this in which the mound is sizable. The others are small mounds or platforms within the Rectangular Enclosure Compound dwelling sites.

Possible Tomaval Community Buildings are the courtyards within the Compound dwelling sites. Then there are the Great Rectangular Enclosure Compounds which might have been religious or political gathering places. These enclosures are, however, much larger than those we have been calling Community Buildings; and in the one that was excavated (V–171) the living refuse was sufficient to suggest routine, day-to-day, settled occupation.

In La Plata and Estero, Pyramid Mound building tapers off and, perhaps, dies out. There is an adobe mound within a walled enclosure in the La Plata Period, and the idea of the small mound or platform within the Compound dwelling site is present. But there is no evidence for the construction of big mounds. The Community Building concept is suggested, as in Tomaval, by the courtyards within Compound sites and the Great Rectangular Enclosure Compounds. There is, also, one special building of the La Plata Period which may be a Community Building (V–44).

In our tracing out of the concept of the Pyramid Mound as the seat of a special building, we have seen that it first appears in the Puerto Moorin Period and reached its florescence in the Late phase of the Gallinazo Period. Mound building continued in Huancaco, when many of the older mounds were still utilized or, perhaps, built over. Gallinazo and Huancaco mounds were built singly and in groups, and the largest mounds were parts of Pyramid-Dwelling-Construction Complexes. The building of mounds declined in the Tomaval Period, and a change is seen in the new type of small mound built within an enclosure wall or within a Compound dwelling site. A prototype for this idea, the mound within the enclosure wall, may be the occasional Huancaco trait of a system of walls or enclosures attached to Pyramid Mounds or Pyramid-Dwelling-Construction Complexes. As with dwelling types, the change in trends effected in Tomaval continued through La Plata and Estero.

There are two points in this story at which the impact of new ideas was undoubtedly felt. The first was the introduction of the mound-building idea in Puerto Moorin; and the second was the sharp decline in the mound cult beginning with Tomaval. Each impact started a trend which was carried out in the subsequent periods, probably without significant new additions or influences.

The other concept, that of the large building or enclosure which is not an ordinary dwelling site, is less surely followed than that of the Pyramid Mound. In Guañape, such buildings occur near occupation sites. For Gallinazo, courtyards within dwelling-construction groups or large rooms in castillos may have served such public purposes. In Huancaco, they are again isolated foundations near, but not actually connected with, dwelling sites. Also, the Huancaco palace complex rooms and the large rooms of the castillos suggest possible Community Buildings. From Tomaval times on, there are large courtyards within dwelling compounds and also separate large buildings.

FORTIFIED SITES

There are no known fortifications or refuge sites of the Cerro Prieto Period. In Guañape, there are the hillcrest platforms. These, as has been explained, may have been small refuge dwellings, lookout stations, or shrines. They are not obviously fortified. Similar sites, the Hilltop Platforms, are present for every Virú period except Huancaco. Most of them are larger than the Guañape hillcrest platforms, but they still would not qualify as large fortified centers. Whatever their purpose, they were probably occupied throughout the Virú sequence.

The great Hilltop Redoubt type of fortification was first built in the Early Puerto Moorin Period. These sites, as we have stated, enclosed Pyramid Mounds; but dwelling units were also within the walls. In V-80, for example, there are house foundations for about the equivalent population of one of the Scattered Small House or Irregular Agglutinated Villages of the period. The space within the outer wall of the Redoubt is sufficient, however, to have held many times that number. These sites were not common. V-80 was occupied in Early Puerto Moorin and then abandoned. Apparently, V-132 continued through Late Puerto Moorin and into Early Gallinazo. After that, the Hilltop Redoubt type of fortified site was no longer constructed or used in Virú.

The Castillo Fortification Complex must have replaced the Redoubt. The essential feature of the castillo is an adobe pyramid or terraced platform on a high peak. Most of the castillos have encircling walls, like the redoubts, and other systems of defensive walls. There are signs of small buildings within the castillos which probably were dwellings; and in some of them, as mentioned in the previous section, there are large chambers. The combination of functions, as suggested by the architectural features of the castillos, would appear to be a direct outgrowth of the Hilltop Redoubts which also had Pyramid Mounds and dwellings within the same fortified enclosure. The castillo enclosures are, for the most part, smaller than the Hilltop Redoubts; and, in view of the nature of the terrain (the utilization of a smaller, sharper hill or spur), the castillos would not have offered haven to as large a number of persons. The Castillo Fortifications were largely constructed in the Late Gallinazo phase, but some of the larger ones were occupied during both Late Gallinazo and Huancaco, and additional building or enlargement probably went on during the later period. Like nearly all Late Gallinazo or Huancaco Period adobe structures, the adobes of the castillos were the plain or cane-marked rectangular mold-made type.

The big Huancaco site, V-88-89, is part Pyramid-Dwelling-Construction Complex, part palace, and part fortification. It is not encircled by a wall, although there is a system of walls in connection with it that may have been for defense. Aside from these, its size and position suggest a stronghold. The high platforms and large "palace" rooms on the platforms have one other parallel in Virú. This is the "Palacio de Sarraque" (V-75), a part of the Sarraque Castillo Fortification Complex. The Sarraque *palacio* has a surface sherd dating of Late Gallinazo, but certain observations also argue for a Huancaco date. It is, thus, suggested that in the Huancaco Period the "palace" features were added to the earlier form of the castillo, and site V-88-89 represents such a final modification and elaboration of the castillo idea.

There is no conclusive evidence that the castillos of Gallinazo and Huancaco were used during the Tomaval Period. It is possible that the Great Rectangular Enclosure Compounds served as refuges or forts in the Tomaval Period. If so, they were also the important fortified sites or strong points for the ensuing La Plata and Estero Periods.

There is a Hilltop Agglutinated Village (V–61) in the Tomaval Period which is perched on top of a high hill bordering the Middle Valley. This site has defensive connotations, but it is an ordinary dwelling cluster without the special features of the redoubt or the castillo. Like the Great Enclosure Compounds, this site was also occupied throughout Tomaval, La Plata, and Estero.

Before leaving the matter of fortified sites, we should also consider the implications of the smaller compound sites. These were dwelling units, but their enclosure wall also gave them a certain protection. This defensive aspect is not comparable with what we have seen in the redoubts, castillos, or Great Compounds; but it is a possible factor to be taken into account in any review of defensive positions. Likewise, the walled quebradas of Queneto and the various quebrada sections of the north side of the Huacapongo are fortified positions; but, as in the case of the ordinary walled compound dwelling, or the Hilltop Agglutinated Village, these quebrada sites are regular living locations with some defensive aspects, not specialized forts.

Although the castillo may have developed out of the Hilltop Redoubt, the acceleration in adobe mound-and-castillo building in Late Gallinazo and Huancaco may have resulted from Mochica influence prior to, and during, a Mochica invasion. The abandonment of the castillo comes with the arrival of Tomaval (the Tiahuanaco horizon). Here, again, as in ceramics, dwellings, and pyramidal mounds, there is a noticeable discontinuity. And, as in these other traits, the subsequent La Plata and Estero Periods follow the new trends set down in Tomaval.

CEMETERIES

Disposal of the dead throughout the Virú sequence is by interment in a primary condition. Areas of burial have been referred to as cemeteries. In no period are there purposeful surface markings to indicate these cemeteries. A few Guañape and Puerto Moorin cemeteries are known. Those which have been so identified seem to have been located without reference to any particular buildings or features. In Gallinazo times many burials were made in old Dwelling-Construction and Earth-Refuse Mounds. There were, in addition, cemetery burials in flat ground on the margins of the Valley (see Larco Hoyle, 1945 b). Some of these contained stone-lined tombs. In Huancaco grave furniture is more elaborate, the tombs themselves are more frequently lined (adobes), and they are often placed near an outstanding site such as a castillo, pyramid, or Pyramid-Dwelling-Construction Complex. This greater emphasis upon the disposal of the dead corresponds to the mortuary elaboration of the Mochica culture elsewhere.

The Tomaval people often buried in or near the earlier Huancaco cemeteries. Their graves, as a general rule, were less well prepared and furnished. La Plata cemeteries are similar to those of Tomaval.

The only trend in cemeteries is a mounting complexity and refinement of tombs and tomb goods, climaxing with the Huancaco Period. With this climax, the cemetery is often found near an important politico-religious building. Subsequent periods show less elaboration, but old cemetery sites continue in use.

PUBLIC WORKS

Public works, considered here, are major features which have required group participation and coordinated effort for their construction. This excepts large politico-religious or fortification sites already discussed. Specifically, we are concerned with walls, canals and irrigation works, and roads. These features have been described or mentioned, from time to time, under the various site descriptions as most of them relate to, or are seen in conjunction with, certain sites. They have not, however, been treated separately in a special section. For the most part, the information on these public works is spotty and must be pieced together. They are best summarized here as a "reconstruction."

There are no major public-work features that can be attributed to either the Cerro Prieto or Guañape Periods. As is evident, and as will be emphasized throughout this discussion, the dating of extensive wall systems, canals or cultivation plots, and roadways is extremely difficult. It is possible that some of the canals, walls, or roads which I am assigning to later periods belong to Cerro Prieto or Guañape, but, for various reasons, I do not think that they do. Chief among these is that neither of these periods is well represented, or represented at all, in the areas of the Valley where many of the public-work features are found. Secondly, the other achievements of the peoples of these two periods in the Virú Valley are not such as to lead one to expect that they would have excelled in large-scale works.

For the Puerto Moorin Period the evidence for roads, canals, or extensive walls[57] is suggestive but not conclusive. In the upper Huacapongo, on the Valley floor, there are two Pyramid Mound sites which are connected with long stone walls. At one of these sites, V–185, walls radiate out from the base of the mound. One wall, which can be easily traced, continues for a distance of 200 to 300 meters and is joined to another mound (unsurveyed). The other site, V–198, which is a little farther up-Valley, consists of two mounds, side by side. A wall joins the base of one of these mounds and extends out some 600 meters, eventually making a right-angle juncture with another great wall. It would appear that these walls associated with V–185 and V–198 were intended as defensive works, but their dating is complicated by the difficulty of dating the mounds. It will be remembered that V–185 and V–198 were two of the earth and rock Pyramid Mounds with ceramic components of both Puerto Moorin and Tomaval Periods. I am of the opinion that at least some of these mounds, and quite probably these two, date from the Puerto Moorin Period, but it is also evident that they were used, and possibly rebuilt, during the Tomaval Period. To which occupation or use can we date the walls? As there is evidence from other locations in the Valley that wall systems of this type are frequently a post-Puerto Moorin trait, it is difficult to associate them as Puerto Moorin, and the probabilities favor a Tomaval dating.

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[57] This excepts the encircling enclosure walls of the Hilltop Redoubts, V–80 and V–132. These wall constructions are certainly Puerto Moorin.

At two other earth and rock Pyramid Mound sites in the upper Huacapongo, not far from these discussed above, small canals run around the bases of the mounds. These are not drainage gutters but parts of a larger prehistoric irrigation system for this part of the Valley. They were fed by small distributary canals which came out of the main canal farther up the Valley (see pl. 50, *top*, *center*, for view of this main canal). The water was led down to these mounds (sites V–199 and V–230) and past them. The collections from these two sites date as Huancaco and Puerto Moorin. The same problem of dating arises as for the walls. Thus, we have no conclusive proof of canal systems for the Puerto Moorin Period, although it is likely that canal irrigation existed at this time in the Huacapongo. As there is abundant evidence for Huancaco irrigation, there is a greater likelihood that the small canals around the bases of mounds V–199 and V–230 date from this later period.

Gallinazo is the first Virú period at which we can say, for certain, that there was both large-scale irrigation and extensive wall construction. Extensive outlying, or outrunning, walls are features of the Castillo Fortifications of the period as exemplified by V–51, V–68, and V–73. In each case, these walls lie outside of the castillo enclosure, although they are sometimes attached to it. There is little doubt but that they are of a defensive nature and were meant to strengthen the position of the castillo and, in the case of V–51, the large village at its foot.

Irrigation systems also seem to relate to these Gallinazo castillos. The ancient main canal on the north side of the Valley passes just below the castillos of San Juan and Tomaval. On the opposite side of the Valley the main south canal was probably built into the adobe base of the big platforms of V–75, a part of the Sarraque castillo (see pl. 52, *top*, for view of this canal below V–76).

The Gallinazo Period dating of the major canals is most strongly suggested by the presence of large cultivation areas in Lower Virú-North near the Gallinazo site group. At V–59 (Gallinazo proper), cultivation plots, clearly seen in the dried, crackled mud beds on the surface of the sands, are on the west and south sides of the site (pl. 54, *center*). The patterns of these plots are defined by a series of narrow (1 meter) channels interwoven together in S-shaped or "hairpin loop" curves. The original depth of the channels is difficult to estimate, but probably they were not deep. Water passed through this intricate network of channels, having been admitted by a large diversionary channel out of the main canal. In these flats, much of that water was probably retained to nourish the soil, and the excess was carried off to the sea. A kilometer or so southwest of V–59 there are more of these plots around the middens and cemeteries, V–160 and V–159. These latter fields are enclosed on two sides by a wall made of small rectangular adobes. As the entire Gallinazo site group area lies outside of the lines of present irrigation, and as the area was virtually deserted after the close of the Gallinazo Period, it is almost certain that these cultivation plots date from that period. To have brought water to this section of the Valley, which is between 4 and 7 kilometers northwest of the river bed, would have necessitated a canal along the northern perimeter of the Valley (see pl. 53, *bottom*, for such a canal). Such a canal would have had its origins much higher up in the Valley. Probably, it was the same canal which passed beneath the walls of the San Juan and Tomaval castillos on the north side of the Valley. In view of this, there is little doubt that full-scale, coordinated Valley irrigation was under way by the close of the Gallinazo Period, if not earlier.

Defensive wall building in the Huancaco Period seems to have been a common practice. In Upper Virú the dwelling site V–192 is situated in a small quebrada, the mouth of which is closed with a great wall that undoubtedly served a defensive purpose. This pattern of the fortified quebrada was followed in a great many other places. In Huacapongo-North, sites V–30 and V–32 and the Community Building V–28 lie between two trans-quebrada walls in the Gudarra quebrada (figs. 38, 51). West of this, in Niño quebrada, V–143, V–150, and the V–20 Community Building have a similar type of location between walls which extend from one hill spur to the next. The walls which cross Gudarra are 1,500 meters long and those in Niño, 1,100 meters. The distance between the two walls in each quebrada varies between 100 and 300 meters. In effect, they make walled communities, or supercommunities, arranged in belts across the lower edges of the quebrada outwash plains. The walls are made of large boulders and are a meter or more thick. Now partly fallen, they originally could have been of a height effective in defense. Placed as they are, the communities within them would have had security against attack from either Valley floor or the mountains behind them.

Farther up the Huacapongo, and still on the north side, the Pyramid-Dwelling-Construction Complex, V–149, another Huancaco Period site, lies within a walled area (fig. 45). Two-hundred-fifty meters west of V–149, the big Tomaval Period Pyramid Mound, V–148, is also within a wall-enclosure system. It is clear that the walled defenses built in the quebrada mouths and along the edge of Huacapongo-North were utilized by Tomaval as well as Huancaco inhabitants. Within the belt formed by the two walls in Gudarra there are, in addition to the Huancaco sites, several with a Tomaval dating (V–24, 25, 26, 27, 29, 183, 184—see figs. 51, 62). Their similarity to the Huancaco sites implies a continuity of occupation utilizing the same public works.

The construction of long adobe walls in the Lower Valley dates from the Huancaco Period. On a low hill opposite the V–88–89 Pyramid-Dwelling-Construction Complex there is a system of walls forming enclosures, or partial enclosures, similar to the rock walls near V–149 and V–148. Some of these (see V–90, V–91, pl. 49, *top*) are 300 or more meters in length. On the north side of the Valley, a wall made of small rectangular adobes parallels the outer edge of the *monte* growth for almost a kilometer (pl. 49, *bottom*). It is seen to good advantage in the Huancaco Period cemetery V–96; but it is probably incidental to the cemetery. Perhaps, at one time, it followed the main outer canal along this side of the Valley; although there is no sign of a canal ditch there now. The wall may have had a defensive purpose, guarding this entire exposed flank of Valley. Its dating is much less secure than the walls associated with V–88–89. The shape and type of adobe suggest Huancaco, but it could be later.

The master irrigation systems of Huancaco probably followed the same general pattern as in the Gallinazo Period although with some modifications. In the Huacapongo, the proximity of such sites as V–149 to the Huacapongo-North main canal suggests that it was active at this time. Above this, the mounds V–199 and V–230, with the small distributary canals leading to and away from their bases, are another argument for Huancaco Period canal systems of complex and considerable extent. Nearer the sea, on the south side of the Valley, V–88–89 was fed by the main canal on that side (pl. 47, *top, left;* pl. 51, *top, center*). At V–139, a Huancaco midden near the beach, there is an area 200 by 100 meters in extent covered with clay-crackled cultivation plots which were once fed by a canal. These plots are rectangular pens averaging 20 meters square. V–139 and these associated evidences of irrigation and cultivation are only a kilometer from the beach but are 4½ kilometers south of the river. In order to bring water here the main south side canal was undoubtedly continued past V–88–89 and carried almost to the sea. On the north side of the Lower Valley it is unlikely that the main canal here ran in the same bed that it did in Gallinazo times. The Gallinazo Group area is largely deserted in the Huancaco Period, but there is an important north side center around the Pyramid-Dwelling-Construction Complex of V–280. This site is considerably farther inland than the Gallinazo Group but is 4 kilometers from the river. It is suggested that the north canal still ran to the vicinity of V–280. From here, however, it must have cut in toward the river, bypassing the Gallinazo Group. The canal course may have terminated at a point some 2 kilometers north of the river in the vicinity of Carmelo Hacienda. The only Huancaco Period cluster of sites in this part of the Valley is near Carmelo.

The big canals of the Gallinazo and Huancaco Periods are ambitious construction works. Even now, filled with sand and partially obliterated, they are still impressive. The south side canal passes through a rocky hill spur by means of a channel several meters wide and deep (pl. 51, *bottom*). This channel is, in part, an artificial cut. Besides the main canal arteries there are, or were, innumerable distributaries. These branches are diverted below or above the main canals and brought back into them as gravity permits. The distributary canals are of different widths but all are considerably smaller than the main canals.

Returning to the subject of quebrada defense walls, it seems fairly certain that many of the wall systems of the Huacapongo drainage served both Huancaco and Tomaval populations. We have mentioned the Tomaval Period sites between the walls in the Gudarra quebrada in this connection. There are others in the Niño quebrada and in the upper Huacapongo. In the latter location there is a great wall which extends completely across the Valley floor, a distance of some 1,800 meters. On the north bank this wall is attached to a wall paralleling a canal. In mid-Valley, the wall running from the V–198 mound (pl. 48, *top*) (see pp. 86 ff.) connects with it at right angles. On the south bank, the wall turns sharply to the southwest and strikes up over the hills for a distance of almost two kilometers. Although the complete plan is not comprehended, it is clear that the objective was defense and defense from attack coming down from the narrow gorge of the extreme Upper Valley. The bulk of the sites which are most immediately protected by the wall are either Huancaco or Tomaval; and, farther down the Huacapongo, these two periods are well represented by both dwelling sites and mounds. Apparently from Huancaco times on, with, perhaps, the densest population and the greatest amount of building in the Tomaval Period, the entire Huacapongo branch was a defended settlement. Not only did the great wall close off the upper end of the Valley, but, behind this, sites were further enclosed within wall systems protecting them from attacks moving over the mountain passes or coming up from the Valley bottoms. Besides those in Gudarra and Niño and the mounds V–148 and V–149, there is the walled complex around sites V–37, V–140, and V–147 (pl. 48, *center*, *bottom*) which dates as Tomaval-La Plata.

Canal systems and irrigation were active in the Tomaval Period. In Huacapongo-North (see pl. 52, *bottom*, for view of main canal in this region), the situation probably continued pretty much as it had in the Huancaco Period. Near sites V–35 and V–36 (fig. 51) there is a series of what appear to be rectangular irrigation pens which probably date as Tomaval, if not as Huancaco. These are built as a set of low, broad terraces and must have been fed by a canal passing just above them. There are, also, two other canals running through them. The individual rectangles are divided from each other by ridges of rock, and they vary greatly in size and shape, averaging about 40 by 30 meters. These cultivation plots are at the eastern end of the Gudarra quebrada, and they lie below the lowermost of the two walls which enclose most of the sites in the quebrada. Between the two walls, in the zone of the sites, there is an important distributary canal which must have served as a source of water for the villages.

In Queneto quebrada, there is a series of canals crossing the quebrada floor (pl. 52, *center*). Near the south side of the mouth of the quebrada there is an area 350 by 150 meters which consists, solidly, of small rectangular cultivation plots (see fig. 22) (pl. 54, *top*). A distributary canal follows along at the top and at the bottom of these plots. The plots vary somewhat in size, but 2.5 by 3.5 meters would be an average. The partitions of these little rectangles, which have the appearance of screen-wire mesh in the air photographs, are lines of rock 50 to 30 cm. wide and of about the same height. There is no masonry; the rock (of small size) has simply been piled in rows. The floors of the rectangles are fairly free from rock and are filled with silt. Each rectangle is a completely closed pen in that there are no openings through the ridges from one pen to another. The whole would have been irrigated by turning water in from the top and letting it gradually fill the numerous rectangles, beginning with those on a higher elevation and slowly overflowing down slope. Overflow water would have been caught in the canal passing below the plots and carried off. These plots differ from those of the continuous curvilinear pattern noted for the Gallinazo Group area in the Lower Valley. There, water gradually ran through a system of little canals. The Queneto plots are, however, similar in principle to the large, closed, rectangles noted in Lower Virú-South, near site V–139, and the above-mentioned large rectangles in the Gudarra quebrada.

There is some question as to whether or not these small gridlike plots are aboriginal. Mr. Richard P. Schaedel informs me that he has seen similar plots in the Santa Valley where they are supposed to be Colonial Period rice-paddies. This is a possibility, but I am not convinced that these of the lower Queneto quebrada are posthistoric. Their proximity to archeological sites and to canals which appear prehistoric suggests otherwise. Like so many settlement features of Virú, we cannot be sure of their dating. If they are prehistoric, I think it most likely that they coincide with the dwelling sites which are nearby and which date from the Tomaval and La Plata Periods.

An intensive area of cultivation for Tomaval and La Plata lies near the coast on the north side of the river. About 1 kilometer in from the beach, on the north side of the river, between sites V–297 and V–106, there is a more or less continuous zone of cultivation plots 3 kilometers long. In addition to V–297 and V–106, there is a series of late sites in the midst of these plots, including V–123, V–108, V–124, and V–301. The plots, themselves, are of the continuous, curvilinear kind rather than the closed rectangles. Near V–106 a section of the little ditches and ridges is quite clearly seen (pl. 46, *top*), and the accompanying sketch (fig. 79) was made there. As will be observed, the system of the flow of water is continuous, but there are also "dead ends." These "dead ends" are double-S figures in which water would be admitted and, presumably, allowed to settle into the ground. The ditches are about 1 meter, or a little less, in width, and it is likely that they were very shallow.

This V–297 to V–106 cultivation strip is well to the south of the Gallinazo site group. It is also much nearer the shore than the sites which are bunched around Carmelo Hacienda. The presence of the plots in this position indicates that the major north side canal was paralleling the Virú River at a distance of at least 3 kilometers from it in the area just back of the coast. Such a channel would have passed south and east of the Gallinazo Group (see pl. 53, *center*). In other words, the Tomaval-La Plata distribution of irrigation water in the Lower Valley-North was similar to the Huancaco system in that both avoided the old Gallinazo region; however, Tomaval-La Plata opened cultivation a kilometer or so closer to the sea than did Huancaco.

It is not known if this Tomaval-La Plata coastal belt of cultivation plots existed on the south side of the river. There are some

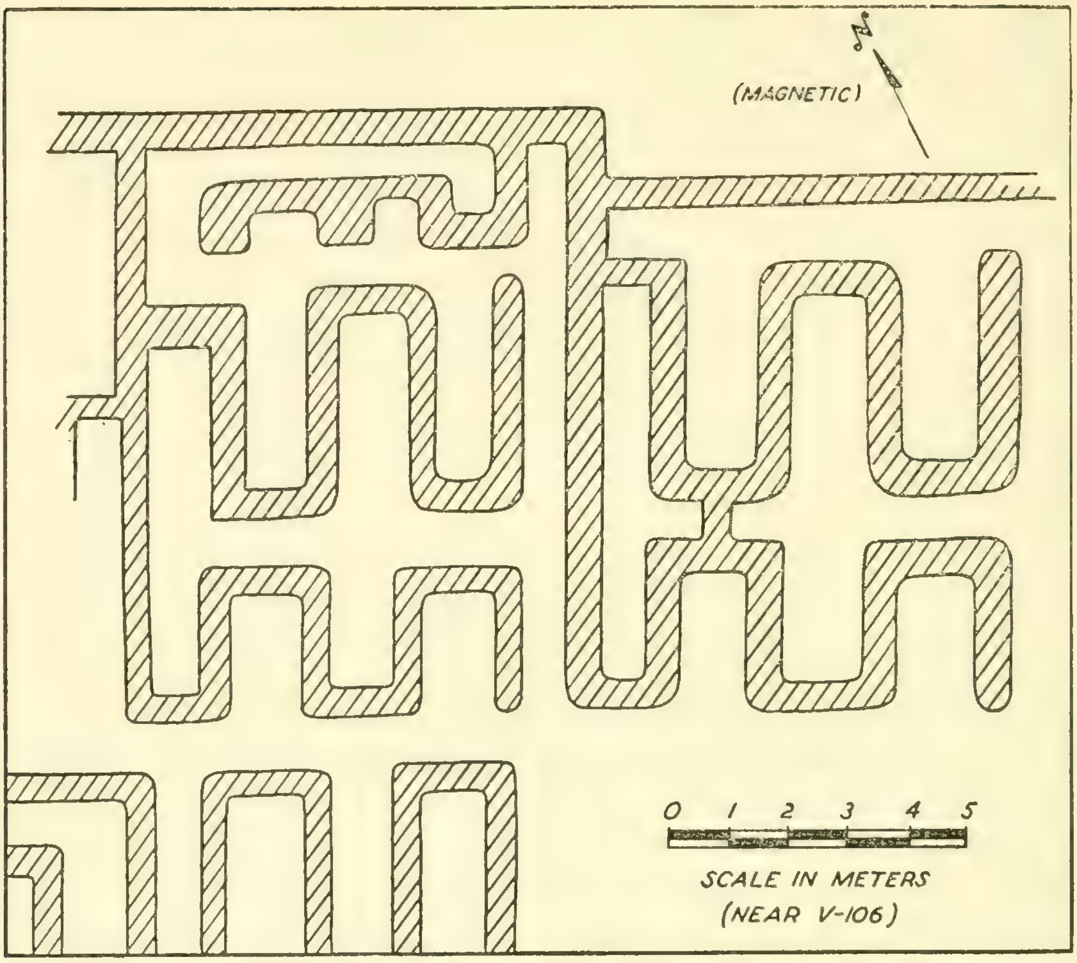

FIGURE 79.—Plan of cultivation plots on flat near V–106. Canals shown in hachure. Probably dates as Tomaval-La Plata Periods.

late period middens in this section, but I did not observe any irrigation systems. It is probable that some do exist. The Huancaco site V–139 is in this region, and I have surmised that the large rectangular pen-type cultivation plots at that site date as Huancaco. They may, possibly, be later. Whatever their date, it is certain that prehistoric canal irrigation was brought to within a kilometer of the sea in lower Virú-South as well as on the north side.

In describing the appearance of Virú today, we have referred to some rectanguloid basins near the coast which were probably *pukios* or groundwater catchments for cultivation or water supply. These lie just back from the present active beach, and they are most clearly seen in the area to the southeast of V–297 and on the north side of the delta. These basins were man-made. Their floors are about 1 meter below the surrounding ground level, but the dirt taken from them has been stacked upon the intervening walls so that they give the impression of greater real depth than they actually have. Site V–286 (pl. 54, *bottom*), which is an area of *pukio* cribs farther from the delta than those to which we have just referred, had a pottery surface collection of Tomaval and later materials. More significant, is the Tomaval-La Plata concentration of sites in the beach dune country, near the *pukios*. This suggests that the basins were made in Tomaval times or later.

In discussing Tomaval, I have made little distinction between public-work features which could be attributed to that period and those probably belonging to La Plata. In most cases, they are the same. In the Huacapongo there are La Plata sites, and it is likely that they continued to be protected by the old defensive wall systems. Similarly, in Queneto quebrada there are La Plata sites, and in the area near the beach La Plata is as well represented as Tomaval. In brief, there seems to be very little difference in the works of the two periods.

With the Estero Period, there was probably a continuation of the Tomaval-La Plata irrigation systems. Site V-124, in the midst of the cultivation plots near the beach, is Estero in time; and there are other instances of Estero occupation in the beach area. Up Valley, there is only one significant site, the large Rambling Enclosure Compound in the upper Huacapongo, V-179. This site is large enough to have incorporated the number of inhabitants equivalent to the Tomaval and La Plata sites in the same general region. The people who lived in V-179 undoubtedly continued irrigation.

We have not, to this point, said anything of the Virú Valley roads. Roads are observed at several places in the quebradas of the upper regions of the Valley where they can be very clearly followed on the rocky surfaces. In Queneto there are a number of such roads. These are usually straight, cleared or paved pathways, 4 or 5 meters wide. Ford (1949, p. 34) mentions these, offering the explanation that they may be astronomical lines rather than actual roadways. (See Kosok, 1947.[58]) He feels that they are too straight and ascend heights too impractical to be true roads. There is one of these cutting in an almost, but not quite, straight line across the floor of Queneto. It is unpaved and extends for a distance of 1,300 meters diagonally across the quebrada. This particular road does not ascend the heights on either side of the quebrada floor. There are no evidences of sites along most of its course, but near its southern terminus it passes through a little cluster of Gallinazo and Huancaco dwellings. One Gallinazo site (V-43) is situated immediately upon the road.

One of the most impressive short roads is in connection with the undated site, V-79, which is situated on the southern tip of Bitín, and has two roadways leading up to it. Each of these is about 5 meters wide. One ascends the face of the hill and is outlined in large stones (pl. 55, *top*). The other ascends more gradually parallel with the face and on the diagonal. Its construction necessitated excavation in cutting out the road ledge against the face of the hill, and it is supported by a masonry retaining wall. Site V–79, apparently a dwelling site, probably dates from the later periods, most likely La Plata.

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[58] See also Horkheimer (1947) for another interpretation of somewhat similar lines or "roads" in the Nazca region.

The outstanding Virú road is, of course, the great trans-Valley road which passes in an absolutely straight line through the Lower Valley. Coming up the coast, it runs for 14 kilometers in a southeast-northwest direction, entering the Valley over the sandy wastes between the Cerros Compositan and the sea, striking through the heart of the cultivated area, and emerging into the pampa between the Purpur sand dune and the coast.[59] Its northwestern terminus is an isolated Tomaval Period building (V–282) on the edge of an old high terrace above the beach. This point is the highest elevation along the coast for several kilometers in either direction.

It is likely that the road continued on, both to the north and south of the Virú Valley. In the desert, at its southeastern end, it can be followed by rows of stones (walls?) (pl. 55, *center*) which indicate its width to have been approximately 10 meters. Down in Lower Virú-North, near the river, the road is marked by tapia adobe walls placed between 7 and 8 meters apart (pl. 55, *bottom*). These walls are 65 cms. in width.

There are few sites of any kind immediately adjacent to the roadway, and it gives the impression of a road laid out with an intervalley rather than an intravalley purpose. Such a road could well have been incorporated into the Inca road system and probably was the Virú section of the famous Inca coastal highway. The two sites found near the road are a Huancaco Period Pyramid Mound, V–288, and the isolated house foundation of the Tomaval Period, V–282. V–282 is directly on the road whereas V–288 is a few meters back from it; thus, the V–282 claim to association with the road is a somewhat better one. Further, V–282, in its terrain situation, appears to be a lookout station or a building functionally related to the movement of travelers and to the road. Finally, the nature of the walls lining the roadway in the Valley suggests the Tomaval Period rather than the Huancaco. The adobe is tapia, and, although the walls are not enormously thick, they are thicker than the tapia walls of the very early Valley periods. In view of these facts, I would surmise that the Virú trans-Valley road was established as early as the

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[59] P. Kosok (personal communication, 1947) informs me that he has heard of another ancient "Inca Road" in Virú. This one is supposed to cross the Valley further inland, passing along the northeast flank of Cerro Bitín and, in general, paralleling the Pan-American Highway although running a bit to the west of it. I have no knowledge of the second trans-Valley road, nor am I able to see any traces of it on the aerial photographs.

Tomaval Period; however, it is almost a certainty that such a road was used in La Plata and Estero times.

THE COMMUNITY PATTERN

To this point in our examination of prehistoric sites, and in the reconstructive synthesis of their development in Virú, we have been concerned with the individual site or feature. Although by no means complete, our archeological sampling of Virú affords us an approximation of a total picture, and the isolated building or pyramidal mound should be viewed with some regard for its specific spatial, as well as chronological, relationships. This is the problem of the community and what composed the community throughout the eight periods of the Valley's prehistoric human occupation.

The community type of the Cerro Prieto Period was a clustering of villages. Near the sea, in the Guañape area, we know of three sizable midden hills of the Cerro Prieto culture. These three villages are encompassed within a radius of 500 meters. Their separation may be entirely the result of the terrain factor. In this part of the Valley there are numerous natural lagoons which retain subsurface water. Dunes are interspersed among the lagoons, and the living sites are on these dunes. Each of the three Cerro Prieto refuse accumulations completely covers its respective hill. This suggests that with the expansion of population it was necessary for the village to separate into spatially distinct parts in order to maintain itself on suitable dry land in this particular terrain. As far as we know, there are no special structures, such as temples, community buildings, palaces, or elaborate mortuaries, to imply either politico-religious hegemony for any one site or autonomy for each.

Besides the three principal Cerro Prieto sites near the shore, there are possible buried village areas at two locations in the Central Valley floor. These can tell us little about community assemblages except to suggest that Cerro Prieto dwellings were not all concentrated near the beach.

Early Guañape is represented, as far as we can be certain, by only a large midden at Guañape. This is a continuation of the occupation begun at the largest of the three Cerro Prieto beach-dune middens (V–71). It is quite likely that there are buried, or otherwise undiscovered, Early Guañape sites in the Valley bottoms.

In Middle Guañape, the big V–71 occupation area is still inhabited, and there is another smaller midden (V–100) of the same phase about one-and-a-half kilometers inland from it. The Middle phase site at V–71 features a special building, or Community Building, as we have called it. The smaller V–100 site has no such structure. It

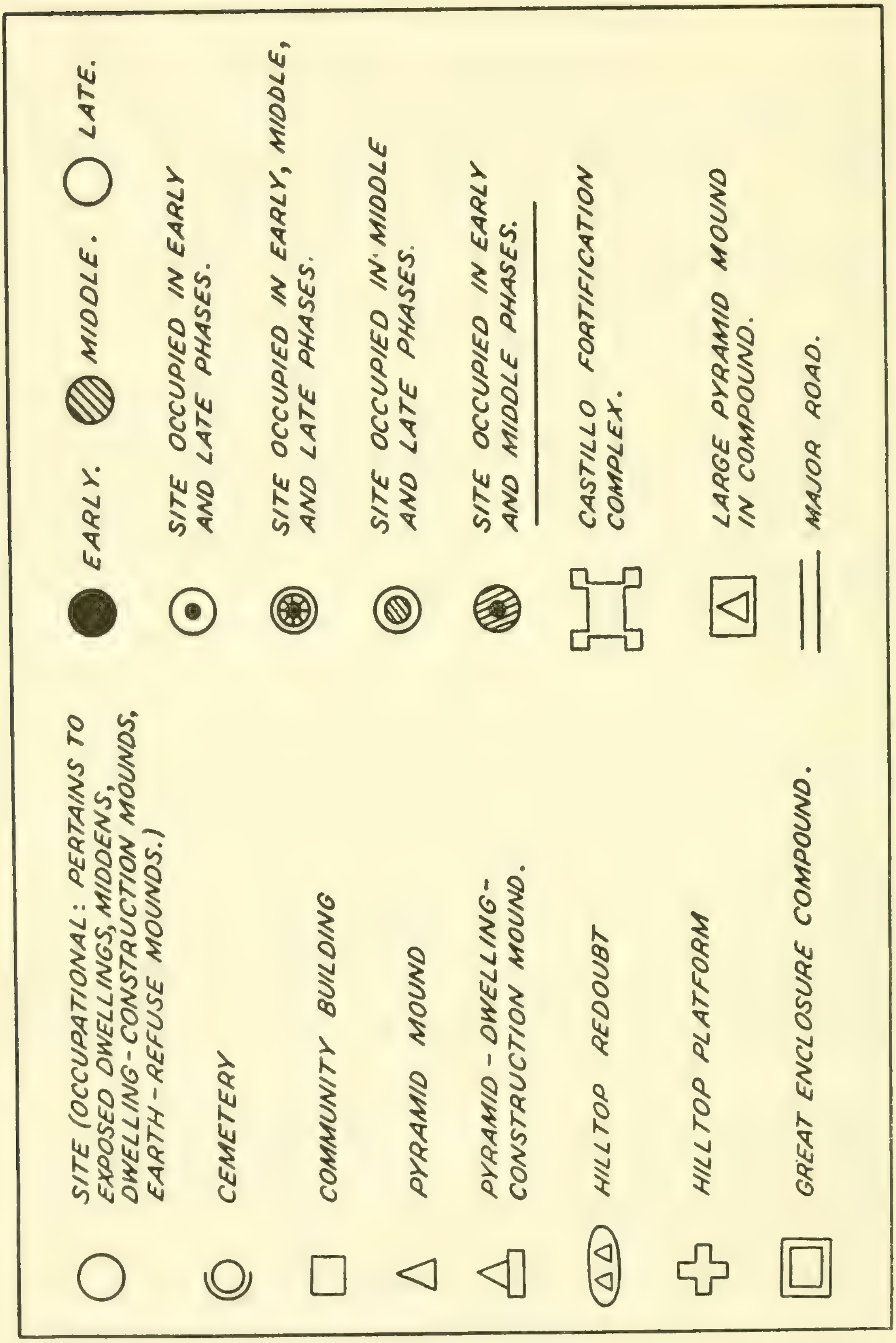

SITE (OCCUPATIONAL: PERTAINS TO EXPOSED DWELLINGS, MIDDENS, DWELLING-CONSTRUCTION MOUNDS, EARTH-REFUSE MOUNDS.)
CEMETERY
COMMUNITY BUILDING
PYRAMID MOUND
PYRAMID-DWELLING-CONSTRUCTION MOUND.
HILLTOP REDOUBT
HILLTOP PLATFORM
GREAT ENCLOSURE COMPOUND.
EARLY.
MIDDLE.
LATE.
SITE OCCUPIED IN EARLY AND LATE PHASES.
SITE OCCUPIED IN EARLY, MIDDLE, AND LATE PHASES.
SITE OCCUPIED IN MIDDLE AND LATE PHASES.
SITE OCCUPIED IN EARLY AND MIDDLE PHASES.
CASTILLO FORTIFICATION COMPLEX.
LARGE PYRAMID MOUND IN COMPOUND.
MAJOR ROAD.

FIGURE 80.—Symbols for community pattern maps.

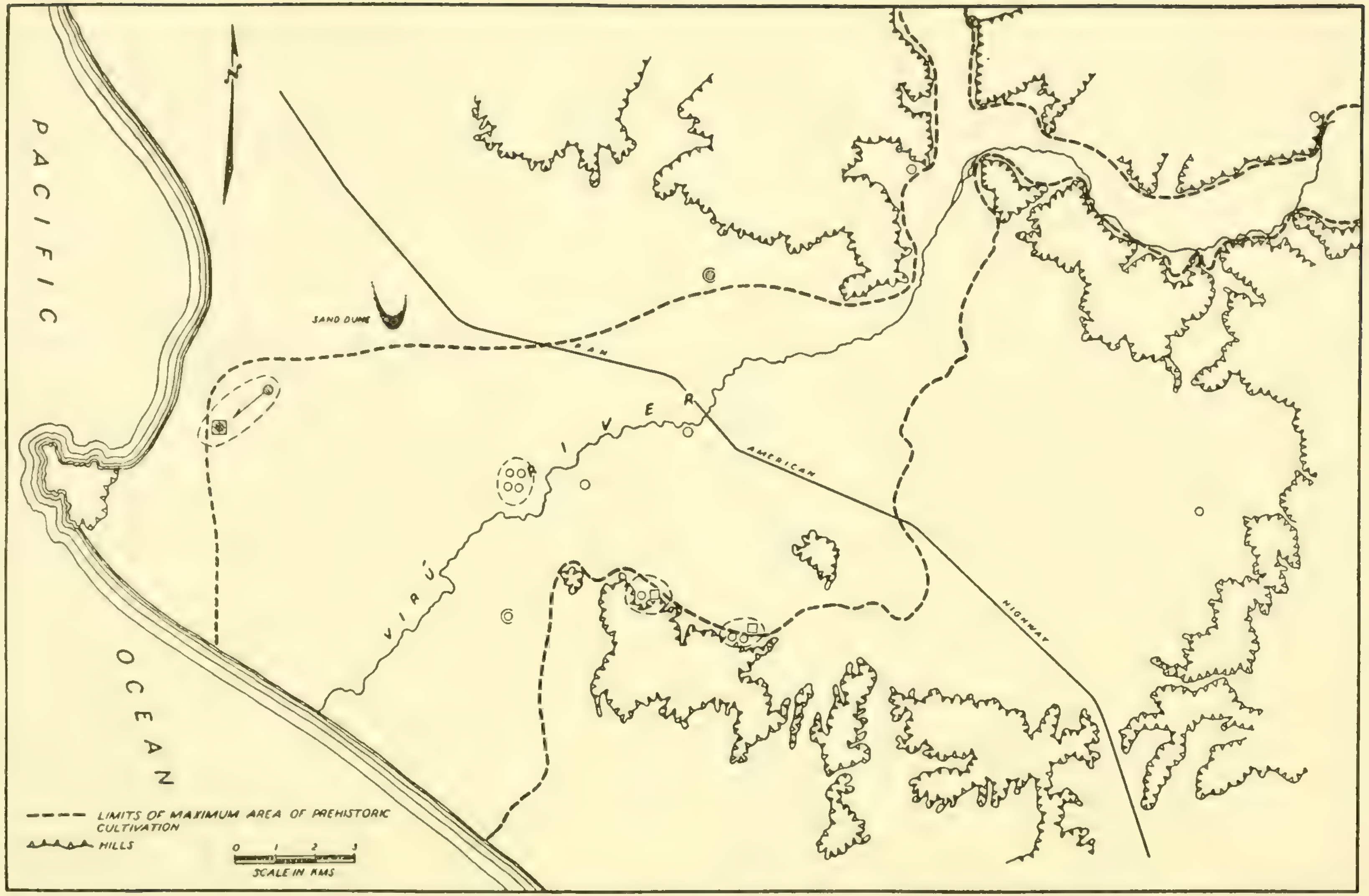
is possible that there were several smaller villages dispersed around V–71 as the important central site; but, so far, the only satellite of which we have knowledge is V–100 (fig. 81). It should be pointed out that the site V–71 was, in its Middle Guañape phase, a midden and dwelling site as well as a temple or public center. That is, it was not an isolated shrine but, apparently, a regular community in which a special building had been raised.

The only other Middle Guañape site is the cemetery, V–2. It is a great distance from V–71 and V–100, and it is unlikely that it would have been a part of the same assemblage.

Late Guañape sites are grouped on the south side of the Valley at the foot of the hills (fig. 81). One group consists of the dwelling sites V–83 and and V–85 and the possible Community Building V–84. The other consists of the dwelling area V–128 and the Community Building V–127. In both groups, the sites lie within a radius of a half kilometer or less. If I am correct in my interpretation of the special or Community Buildings with these sites, then each of these little groups or units is a functioning community with its own politico-religious center and is comparable to the V–71 and V–100 unit.

There are several other Guañape sites in the Valley, and these are either of the Late phase or they are unplaced as to phase. A cluster of four buried middens on the Central Valley floor, just north of the river, may be another community unit comparable to the ones described, although we have no evidence here for a special structure. Elsewhere, the Guañape sites are at great distances from each other. I assume that most of them were parts of site groups but that our survey did not locate the related sites.

The Puerto Moorin community assemblages are more complex than those for Guañape. There are many more sites, and there are more possibilities in the types of special sites which may have served as nuclei for given assemblages. On the north side of the Valley near the beach, in the general region of the V–71 concentration of the Cerro Prieto and Guañape Periods, there are three Early Puerto Moorin sites, V–66, V–101, and V–105 (fig. 82). All of these are large midden areas and two of them are cemeteries as well. They are located a little to the north of, and are slightly farther inland than, the earlier settlements. In none of the three is there conclusive evidence of a structure comparable to the V–71 Community Building of the Guañape Middle phase. The Pyramid Mound V–95, a site of mixed dating, lies 5 kilometers to the east. This mound appears to be isolated from other Puerto Moorin sites with the exception of the cemetery, V–94. However, the relationship here is dubious as the mound is Early Puerto Moorin while the cemetery dates as Late


PACIFIC
OCEAN
N
SAND DUNE
PAN AMERICAN HIGHWAY
VIRU RIVER
LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
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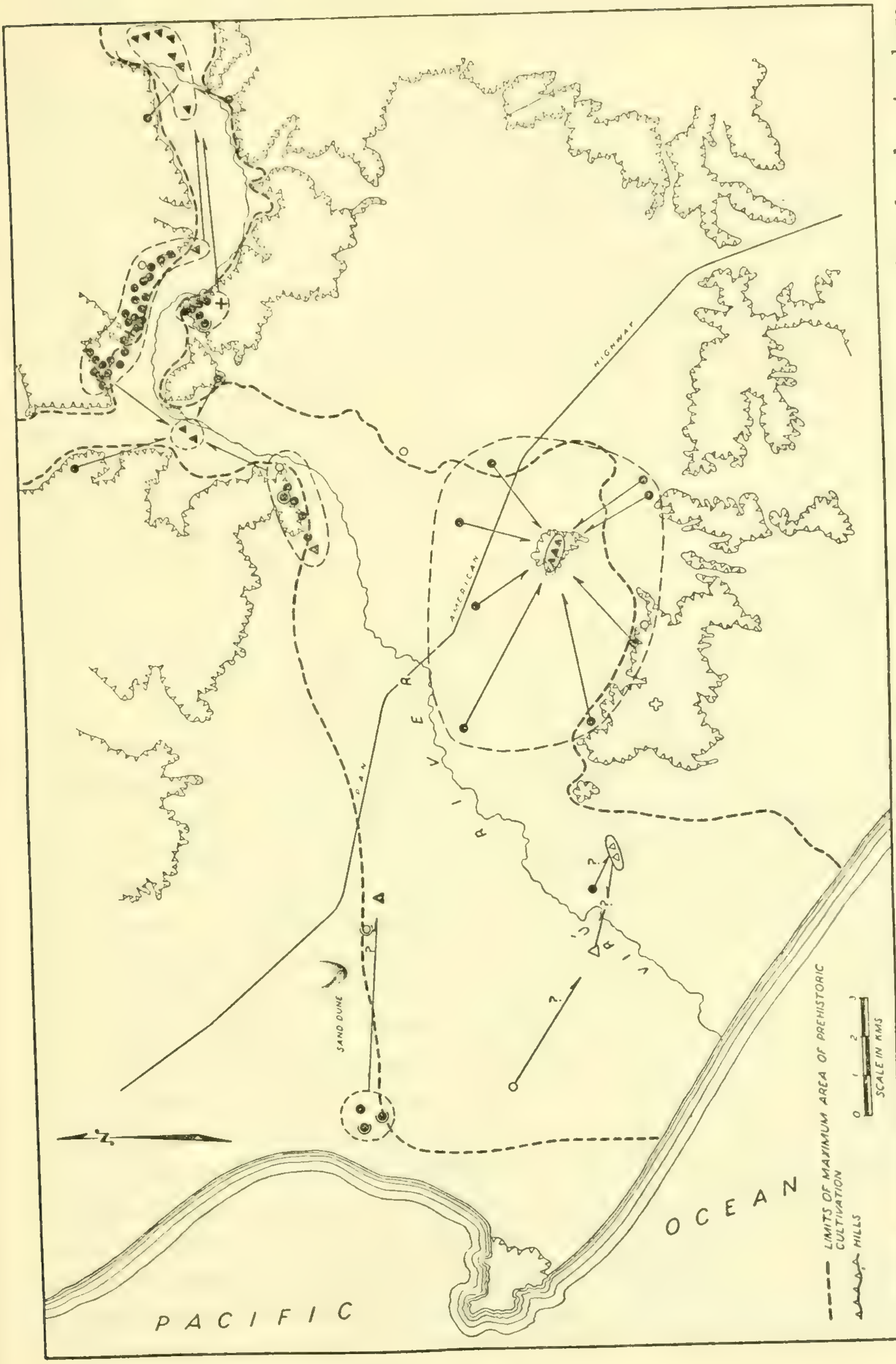
SCALE IN KMS

FIGURE 81.—Suggested community patterns for the Guañape Period. Early phase, black; Middle phase, hatched; Late phase and unplaced as to phase, white.


PACIFIC OCEAN
PAN AMERICAN HIGHWAY
VIRU RIVER
SAND DUNE
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LIMITS OF MAXIMUM AREA OF PREHISTORIC CULTIVATION
HILLS
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SCALE IN KMS

FIGURE 82.—Suggested community patterns for the Puerto Moorin Period. Early phase and unplaced as to phase, black; Late phase, white.

phase. It is possible that V–95 was a public or ceremonial site maintained by the three villages near the beach. The distance between the two (5 kilometers) seems excessive, and it may be that the religious capital or shrine for the beach middens does not exist or has not been discovered.

On the south side of the Valley there are four Early Puerto Moorin villages located against the Compositan hills in the same region as the two Late Guañape assemblages. It is tempting to draw these sites into the orbit of the Hilltop Redoubt, V–80 (fig. 82). V–80, on the crown of Cerro Bitín, is a walled fortified site of considerable size which could have served as a refuge for several hundred people. Within the encircling wall there are dwelling foundations, and there are also three small pyramidal-type mounds. It is suspected that V–80 was both a stronghold and a politico-religious center for several Early Puerto Moorin villages on this side of the Valley. On the diagrammatic map (fig. 82) I have indicated it as the center for the four villages at the base of the Cerro Compositan and for four others from the Valley on the opposite side of Bitín. This presupposes a range of from 2 to 5 kilometers as the sustaining area[60] for the V–80 temple-citadel.

Up Valley we have a great many Early Puerto Moorin dwelling sites, a number of Pyramid Mounds, but no Hilltop Redoubts of the type of V–80. It is possible that in this part of the Valley a system of quebrada wall defenses was used much as in the later Tomaval Period. The confusion of multiple period occupation in the quebradas of Huacapongo-North makes it uncertain, however. There are several groups of Puerto Moorin sites. One bunch lies in the San Francisco area of Middle Virú-North, and this assemblage may have had their politico-religious focus at the Pyramid Mound V–300 (a site of mixed Early Puerto Moorin-Tomaval dating). Or, an alternative possibility for an important central site is the big mound V–103, which is located in the center of the Valley floor opposite the mouth of Queneto quebrada. V–103, a rectangular flat-topped structure of conical adobes covered with stones, was almost certainly built in Early Puerto Moorin times; and it is probable that the nearby mound, V–77, was begun in the same period although it attained its final size and form as a Late Gallinazo Pyramid-Dwelling-Construction Complex. V–103 and V–77 are, from the point of view of their impressiveness and location, a likely center not only for the San Francisco group but for sites below Sarraque, in Upper Virú, and in the Niño and Gudarra quebradas of Huacapongo-North (fig. 82). There are, however, two smaller Pyramid Mounds with Early Puerto Moorin dates in the Huacapongo. V–206, near the Corral Gate, is one of these and V–141 the other. These mounds were, undoubtedly, sustained by the villages of Huacapongo-North. They may have been, in effect, subsidiary "capitals" to V–103. Another mound center is on the Valley floor of upper Huacapongo. Here are seven mounds, all of medium size. Two Early Puerto Moorin dwelling sites were discovered nearby, one on each side of the Valley; however, these seem hardly sufficient to have maintained the seven mounds. Perhaps there are numerous Early Puerto Moorin villages in the surrounding quebradas, which we did not carefully explore, or, possibly, this mound group was constructed by the communities down the Valley in Gudarra and Niño.

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[60] I am indebted to Linton Satterthwaite for the term "sustaining area" which I consider a very apt designation for the area of living sites (and food-producing sites) supporting and owing allegiance to a politico-religious center.

It has been surmised that there are a great many more Late Puerto Moorin sites than those we were able to find and that these sites lie buried beneath later refuse deposits or silts in the lower part of the Valley. In any case, the heavy Early Puerto Moorin population is no longer in the Huacapongo. Down Valley there was another Hilltop Redoubt center with enclosed mounds on the Cerro del Piño (fig. 82). This hill, isolated like Bitín, lies well out in the Valley bottom, and our inability to find Late Puerto Moorin midden sites nearby may be due to their being buried by Valley-floor sediments. One Puerto Moorin site (V–129) is a kilometer distant, but the date is Early Puerto Moorin rather than Late. On and below the Compositan hills there are two Late Puerto Moorin sites. One is a village which, spatially, is situated within the orbit of the Early Puerto Moorin assemblage around V–80. The other is a small Hilltop Platform. But these sites seem too distant to have been a part of the Cerro del Piño (V–132) pattern. Across the river from V–132, 2 kilometers northwest, is a tapia adobe mound, V–290. This site suggests the presence of Late Puerto Moorin dwelling sites nearby which would have, in turn, been close enough to V–132 to have been a participant of this center.

Although the Puerto Moorin community-pattern picture for the entire Valley is far from clear, I think it is reasonably well established that there was a group of sites on the south side of the Valley which maintained V–80 as a refuge and a mound center. Perhaps these same people had other Pyramid Mounds on the flat which we did not happen to investigate or discover. On the north side of the Lower Valley there was a population cluster around V–66, V–101, and V–105, but we have difficulty in assigning them to a special center as there are none nearby of which we have knowledge. In the upper portion of the Valley there are a great many Pyramid Mounds of the Early Puerto Moorin phase, but it is sheer guesswork as to just how they fitted into a constellation of dwelling-site-politico-religious center relationships. Late Puerto Moorin assemblages are less clear as we are handicapped by a lack of sites, but a fortified center similar to V–80 was in use at V–132. This V–132 redoubt is closer to the Lower Valley center than V–80, and this may be indicative of a general trend begun in Late Puerto Moorin, namely, greater exploitation of the Valley bottoms.

The concentration of population in the Lower Valley to the exclusion of the upper drainage is characteristic of both the Early and Middle phases of the succeeding Gallinazo Period. In Early Gallinazo the redoubt site, V–132, is still occupied, but we did not locate any nearby middens or dwelling sites of the Early phase. One possible Early Gallinazo community assemblage can be based upon the Pyramid Mound V–169 and two dwelling sites, V–162 and V–235, which are reasonably close by (fig. 83). The main site grouping, however, is in the Lower Valley-North around Gallinazo, proper (V–59). There are numerous dwelling-constructions here within a radius of less than two kilometers. These sites are both of the Early and Middle phases. Although it is not certain if there were any Pyramid Mounds in this group during these phases of the Gallinazo Period, some sites contained large chambers or courtyards with elaborately decorated mosaic walls which may have served as community centers. The thickly settled Gallinazo Group area probably composed an integrated assemblage. In the Middle Gallinazo phase there are several other sites in the Valley besides those in the Lower-North region, including a scattering of villages near the river, a Castillo Fortification Complex in Middle Virú-South, and some mounds and dwellings in the Huacapongo; but none of these fall into any plausible groupings.

The sites of Late Gallinazo form several convincing assemblages. To begin with, there is the Gallinazo Group which we observed as the most populous site clustering in the Early and Middle phases. The number of sites in this relatively small area has increased in Late Gallinazo, and, with the construction of the big mounds at the Pyramid-Dwelling-Construction Complexes of V–59, V–152–153, V–155, V–156, V–157, and V–279, the politico-religious centers for the area are clearly indicated (fig. 84). In each case, the pyramid appears to have been built upon or as a part of a dwelling site. Some are larger than others, and a hierarchic ranking of ceremonial or secular centers of power is suggested. If a sociopolitical structure of such nature existed, the largest site, incorporating the largest mound, V–59, may have been the "capital."

There are other assemblages which, although not as populous as the Gallinazo Group, seem to be integrated around ceremonial sites. In Lower Virú-South there is the possibility of one based upon the Late Gallinazo occupation of V–88–89, a Pyramid-Dwelling-Construction. In the upper section of the Lower Valley there are four other suggested patternings. The largest of these is on the north bank of

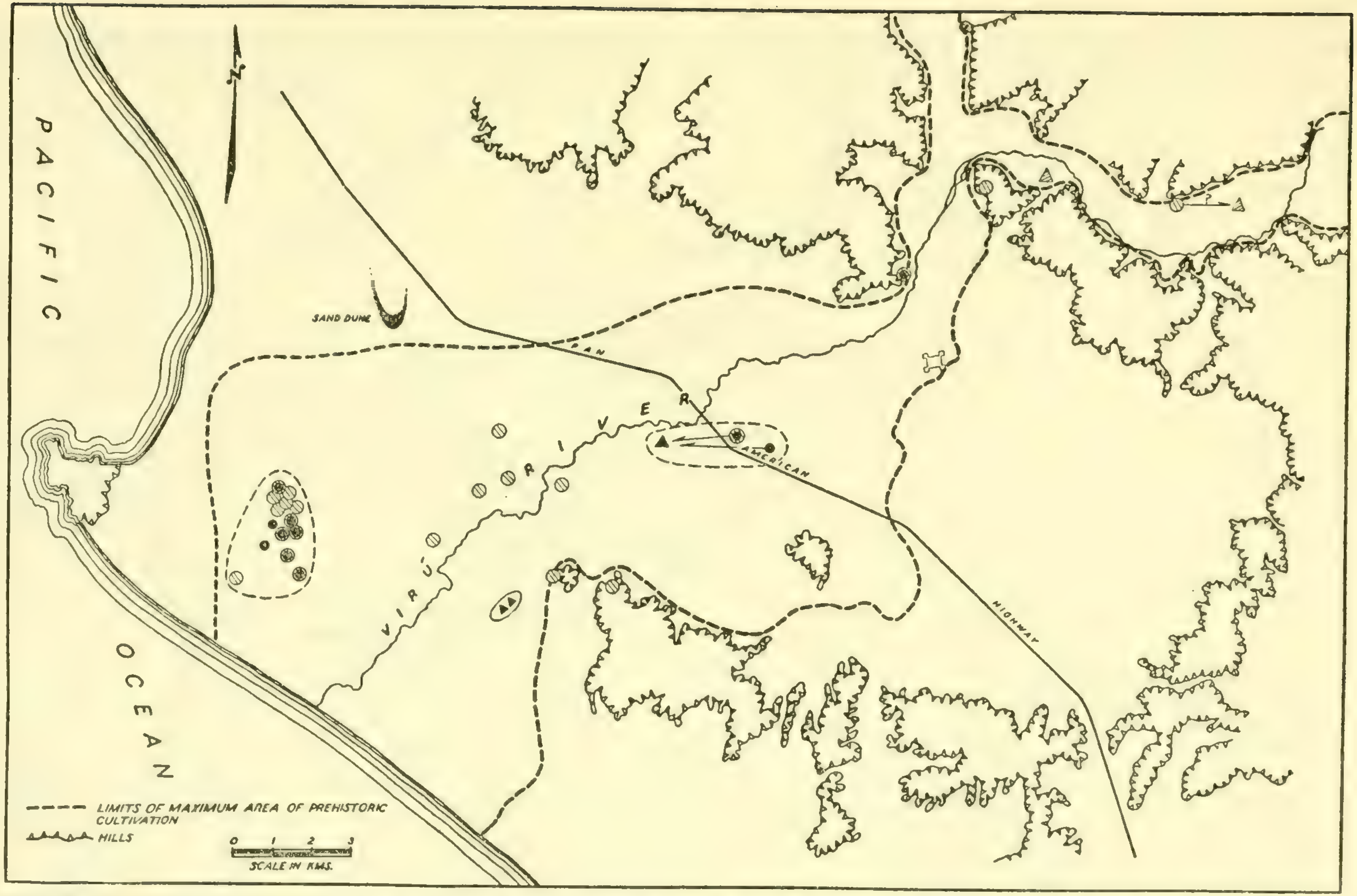
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FIGURE 83.—Suggested community patterns for the Early and Middle phases of the Gallinazo Period. Early phase, black; Middle phase, hatched.

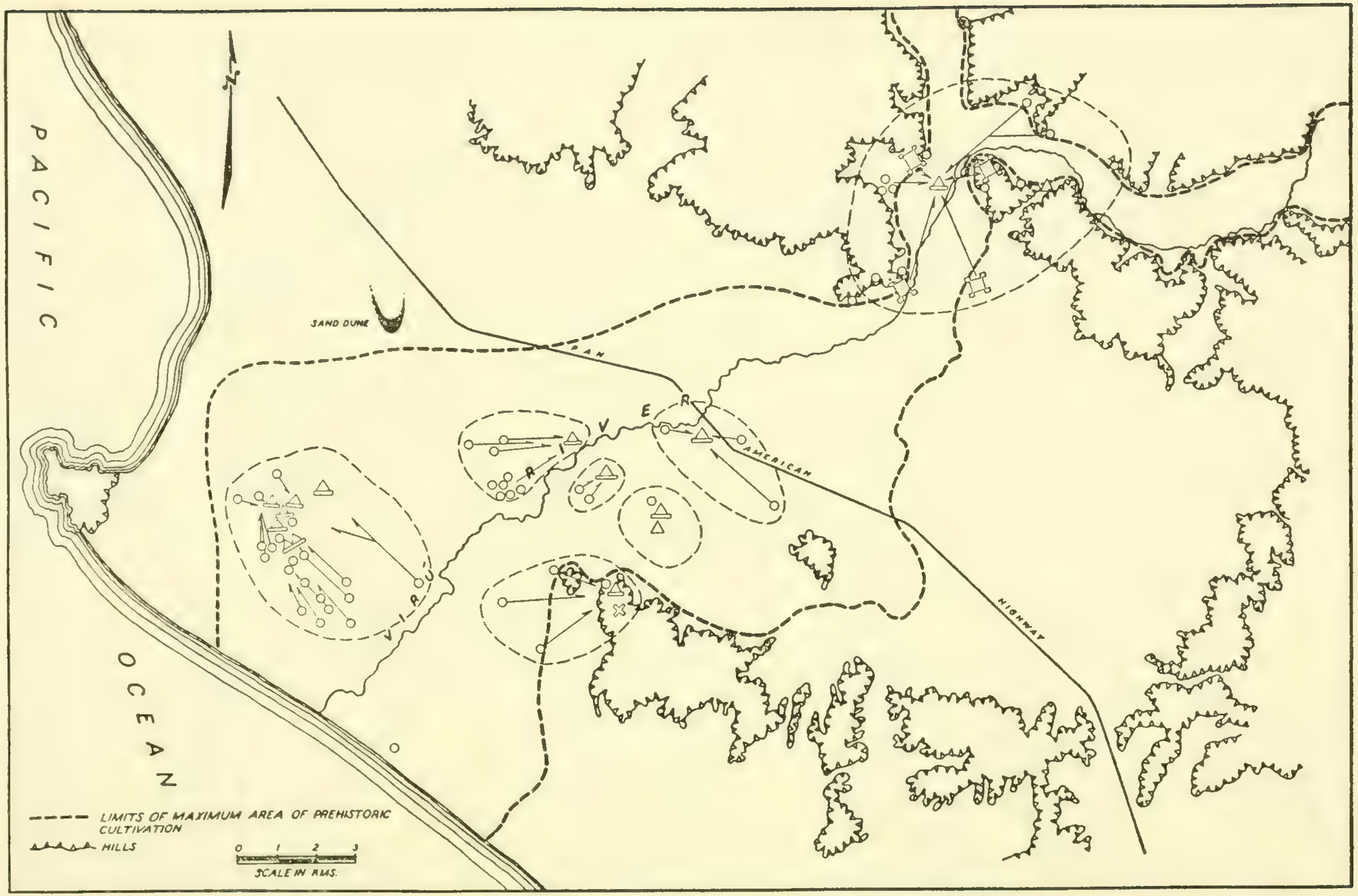
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Figure 84.—Suggested community patterns for the Late phase of the Gallinazo Period. Site unplaced as to phase included.

the river and is centered upon the big Pyramid-Dwelling-Construction, V–240. V–240, unlike the Pyramid-Dwelling-Constructions of the Gallinazo Group, is a huge adobe mound with the associated dwelling forming but a small part of the site. It is easily the most impressive mound in the region, and it may have enjoyed "capital" status over the other three neighboring assemblages on the south side of the river. These last center upon V–175, a moderately large Pyramid-Dwelling-Construction; V–239, a Pyramid-Dwelling Construction of three sizable mounds; and V–165, a small Pyramid-Dwelling-Construction. Farther up the Valley an interesting pattern is suggested by the four castillo fortifications and the big Pyramid-Dwelling-Construction Mound V–77. The four castillos occupy strategic spurs or hills overlooking a narrow neck of the Valley just below the Huacapongo-Upper Virú confluence. There are Late Gallinazo dwelling sites around all but one of the castillos, and, in addition, there are other Late Gallinazo sites in the neighboring Niño and Gudarra quebradas of Huacapongo. In the middle of the Valley narrows, within the rectangle formed by the four castillos and their villages, is V–77. The total impression is that of community assemblage with its strongholds, villages, and centrally located temple.

In our previous discussions of public works the statement was made that the master canal systems of the Virú Valley must have been in operation by Late Gallinazo times if not before. If this is true, and there are good reasons to think that it is, a unified political system for the Valley is implied. Such a system need not have been a strong, centralized authoritarianism, although it may have been; but, at the least, a smoothly functioning confederacy would have been required. The maintenance, control, and distribution of water was the life's blood of the Valley, and intensive agriculturists, such as these people were, could have permitted no serious conflicts about or disruptions within the irrigation projects. Granting the need for political unity, are there any indications of where it centered or how it might have been exercised?

As the upper areas of the Valley were not significantly occupied during the Early and Middle Gallinazo phases, there is no doubt that control of the irrigation projects in these times was in the hands of the Lower Valley inhabitants, particularly the Gallinazo Group residents. In the Late phase it would have been possible for a central authority at Gallinazo proper (V–59) to have allowed an expanding population to settle in a number of subsidiary village and politico-religious center assemblages, maintaining a supreme authority over these subcenters. If this were the case, the assemblage of the castillos and V–77 would have been such a dependency, and the construction of the castillos would have been for the purpose of guarding and maintaining the vital upper courses of the main canals against attack from the mountains. A second explanation would vary only slightly from the first, the difference being that the outlying assemblages had political autonomy, but, nevertheless, lived in harmony with the V–59 group and with each other. There is a third possibility which assumes a chronological division within Late Gallinazo. According to this interpretation (see Bennett, 1950, p. 118), the Gallinazo Group may have been deserted, or well past its peak, at the time the castillos were being built up the Valley. Population had, then, shifted to the Valley neck, which now became the center of power. Such a shift might have been the result of conflict among community assemblages within the Valley with the V–77-castillo group winning out over the Lower Valley Gallinazo Group. Or, perhaps it was necessary to withdraw from the open flats of the Lower Valley to the protection of the hills and quebradas of the upper drainage in order to withstand attack from outside the Valley. The expanding Mochica state to the north, which was later to take over the Valley, may have been the cause for this transfer. Or, there is the possibility that increased salinity of the soil in the Gallinazo Group area, as a result of intensive irrigation, made occupation and cultivation of that part of the Valley unprofitable.

In the Huancaco Period the Gallinazo Group, except as a minor area of occupation, is deserted. There are two small Pyramid Mounds near the river, on the north side, V–288 and V–276, which might have served as a focus for dwelling sites in extreme Lower Virú-North, or these populations might have been drawn into the big "capital" of Huancaco (V–88–89) (fig. 85). Between 2 and 3 kilometers northeast of the V–88–89 Pyramid-Dwelling-Construction Complex is another, and much smaller, center. This is V–166. An assemblage may have been built around this site, but it is so much smaller than V–88–89, and so relatively close to it, that one would expect these sites to have been caught up in the V–88–89 orbit. In fact, the only other possible Lower Valley center that appears large enough to have competed with V–88–89 is the Pyramid-Dwelling-Construction Complex, V–280, on the far north side of the Lower Valley. There are a number of villages and smaller Pyramid Mounds in this vicinity; and the nearby Huancaco cemetery of Purpur is only a little more than a kilometer distant. This last is one of the richest cemeteries of the Huancaco Period in the Valley and suggests a community of wealth and importance.

There are a number of Huancaco cemeteries and village sites along the edges of the Middle Valley. Perhaps these were tributary to a castillo site situated on top of Cerro Santa Clara (V–67), or those on the north side may have focused on the Castillo de Tomaval (V–51). Sites in the Queneto quebrada were undoubtedly under the protection

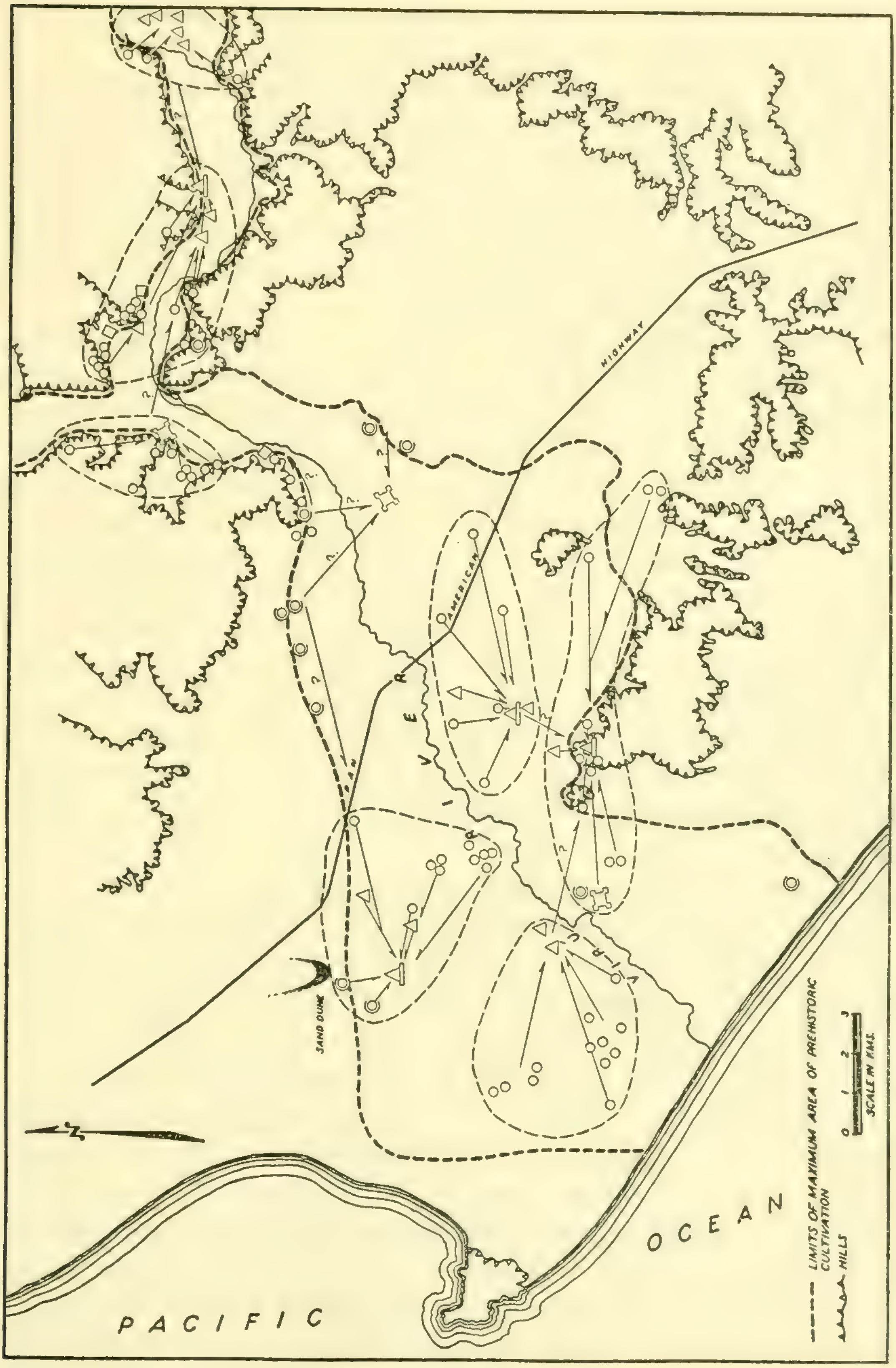
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FIGURE 85.—Suggested community patterns for the Huancaco Period.

of the Castillo de San Juan, a new section of which was built at this time (V–64). It is also possible that the other castillos of the Valley narrows were manned during the Huancaco Period. There is, however, no Huancaco pyramid or Pyramid-Dwelling-Construction Complex to take the place of the Gallinazo site, V–77.

In the Huacapongo there is a big Huancaco Period ceremonial site in the Pyramid-Dwelling-Construction Complex of V–149. This site may have been an important nucleus for the Huacapongo. There is, also, the cluster of mounds which were referred to as an Early Puerto Moorin ceremonial center on the Valley floor of the upper Huacapongo. Many of these were in use in Huancaco times, and there are some Huancaco sites in the nearby hills.

There are fewer Pyramid Mound sites in the Tomaval Period than in the previous periods (fig. 86). In the Lower Valley, with the dubious exception of V–106 and the small mound group V–134, there are none. In the Middle Valley there are the three big San Francisco mounds (V–298, 299, 300). Of these, mound V–300 has a mixed Tomaval-Puerto Moorin date and may have been built in the earlier period. It is also possible that the others are pre-Tomaval in their construction. There is, however, evidence that they were used in the Tomaval Period as were several mounds in the Huacapongo drainage. Among these last are three in the upper Huacapongo bottom which also date from the Puerto Moorin Period. The largest Tomaval mound in the Huacapongo, however, is V–148. This pyramid, which is located a short distance away from the Huancaco Period mound, V–149, may have been the politico-religious nucleus of the surrounding drainage.

There is the strong possibility that in the Tomaval Period the main governmental centers were no longer the great mound sites. The new "capital" sites may have been the Great Enclosure Compounds of the upper section of the Lower Valley (sites V–171, 172, and 246). Still another possibility is the Rectangular Compound of probable Tomaval date, V–130. It will be noted that V–130 lies reasonably close to the trans-Valley highway near the point where the highway crossed the river (see fig. 2). As we have identified the highway with the Tomaval Period, it could be ventured that V–130 was the Valley's principal administrative center athwart the vital communication link with the other valleys. As the Tomaval Period in Virú represents an archeological style horizon of great territorial expanse (the Coast Tiahuanaco), the trans-Valley road, as a link in an intervalley System, takes on significance as an expression of political power. For Virú this power probably lay outside the Valley.

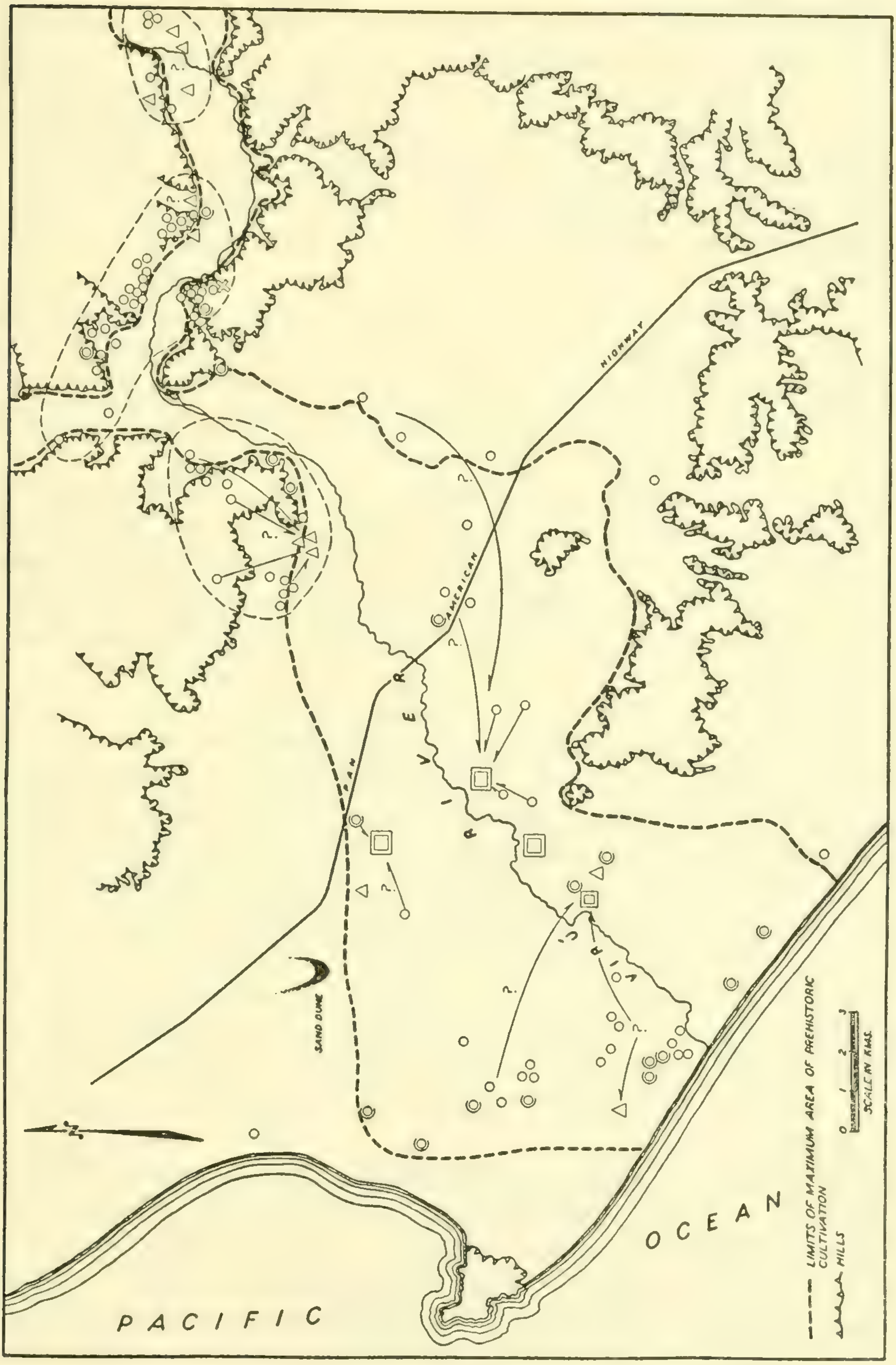
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FIGURE 86.—Suggested community patterns for the Tomaval Period.

By La Plata times a great number of villages were to be found in the dune country back of the coast, and the only mound site here is, as before, the pyramid V–106 (fig. 87). Inland, there are few sites, although the Great Enclosure Compound V–171 was occupied and might have been the administrative center for the Valley. Off the south foot of Cerro Bitín there is a Pyramid Mound enclosed within a wall, but we found no other La Plata villages nearby. In Queneto quebrada a double-chambered Community Building may have had a regional significance as a center, but in the Huacapongo there is only one small La Plata mound (V–140) and it is unlikely that it was important.

Estero Period is similar to La Plata (fig. 88). One mound was recorded; but this one, V–103, was a Puerto Moorin pyramid only casually re-used. Excepting the beach-dune strip, there are few Estero sites in the Valley. The most impressive is the Great Compound V–171.

To recapitulate briefly, Cerro Prieto and Early and Middle Guañape communities were small assemblages of coastal villages. In Middle and Late Guañape, large Rectangular Enclosures or buildings were constructed, and it is thought that these may have fulfilled a community politico-religious function. Late Guañape sites are found farther inland.

In Early Puerto Moorin the Pyramid Mound feature appears. Most of these are on flat, unguarded terrain, but there is one site which is a walled, Hilltop Redoubt in which there are three small Pyramid Mounds. Presumably, communities were organized around the mound sites. In the Upper Valley quebradas the villages were relatively close together, but on the floor and margins of the Lower Valley they were often separated from each other and from the mound centers by several kilometers. Early Puerto Moorin is noted for its dense occupation of the upper portions of the Valley, particularly the Huacapongo. In Late Puerto Moorin the Upper Valley and the Huacapongo were deserted and the Lower Valley became the concentrated center of population, but there is little data on the community assemblage type for this phase.

Early and Middle Gallinazo populations still clung to the Lower Valley, and a dense population center developed in Lower Virú-North around the Gallinazo site (V–59). The community pattern is that of a mound or special center surrounded by villages. In Late Gallinazo there is an upsurge of population into the Upper Valley and the Huacapongo. The nuclear assemblage pattern continues, and there are more of them in the Valley. The largest is the Gallinazo Group which started in Early and Middle Gallinazo, and there are four

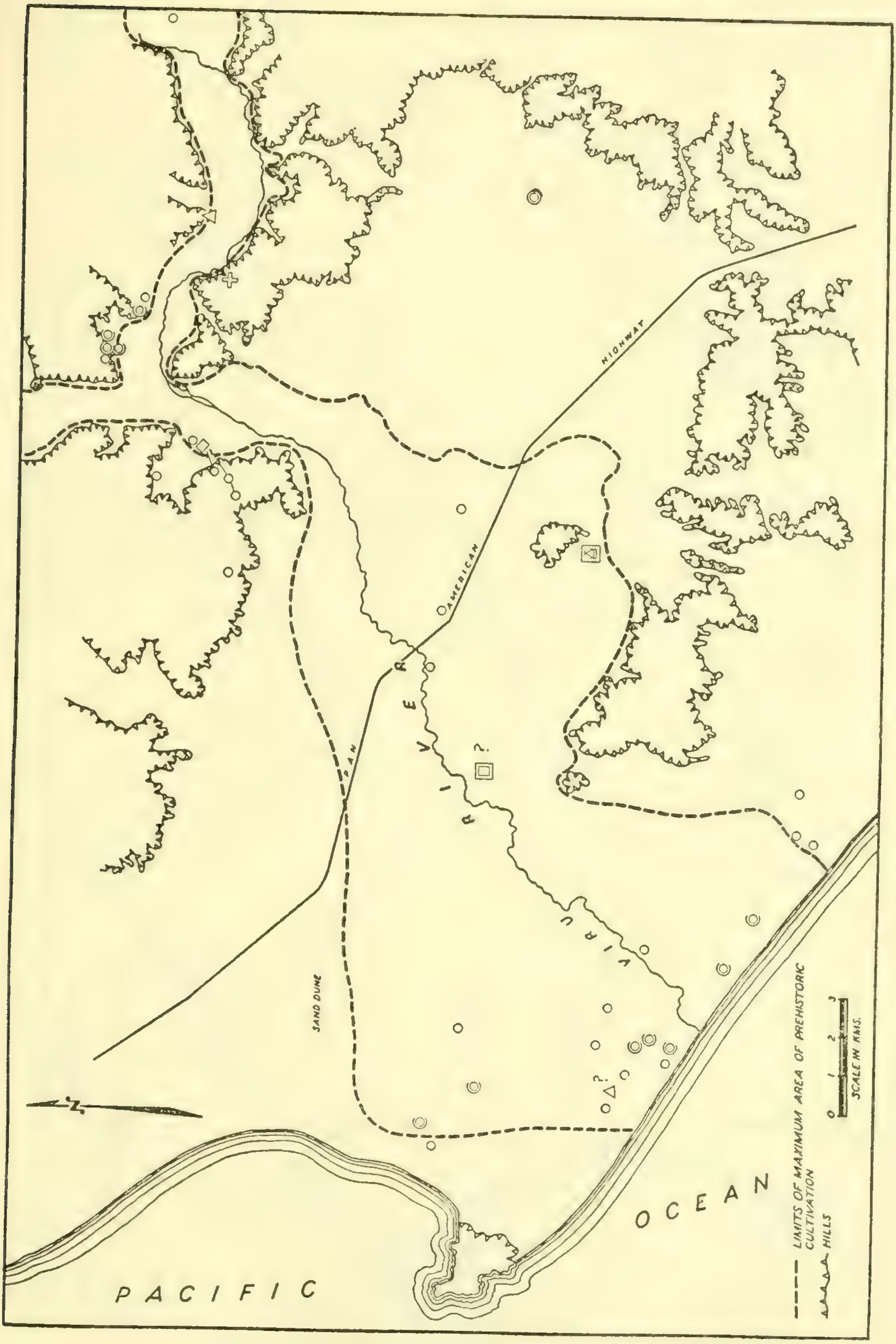
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FIGURE 87.—Suggested community patterns for the La Plata Period.

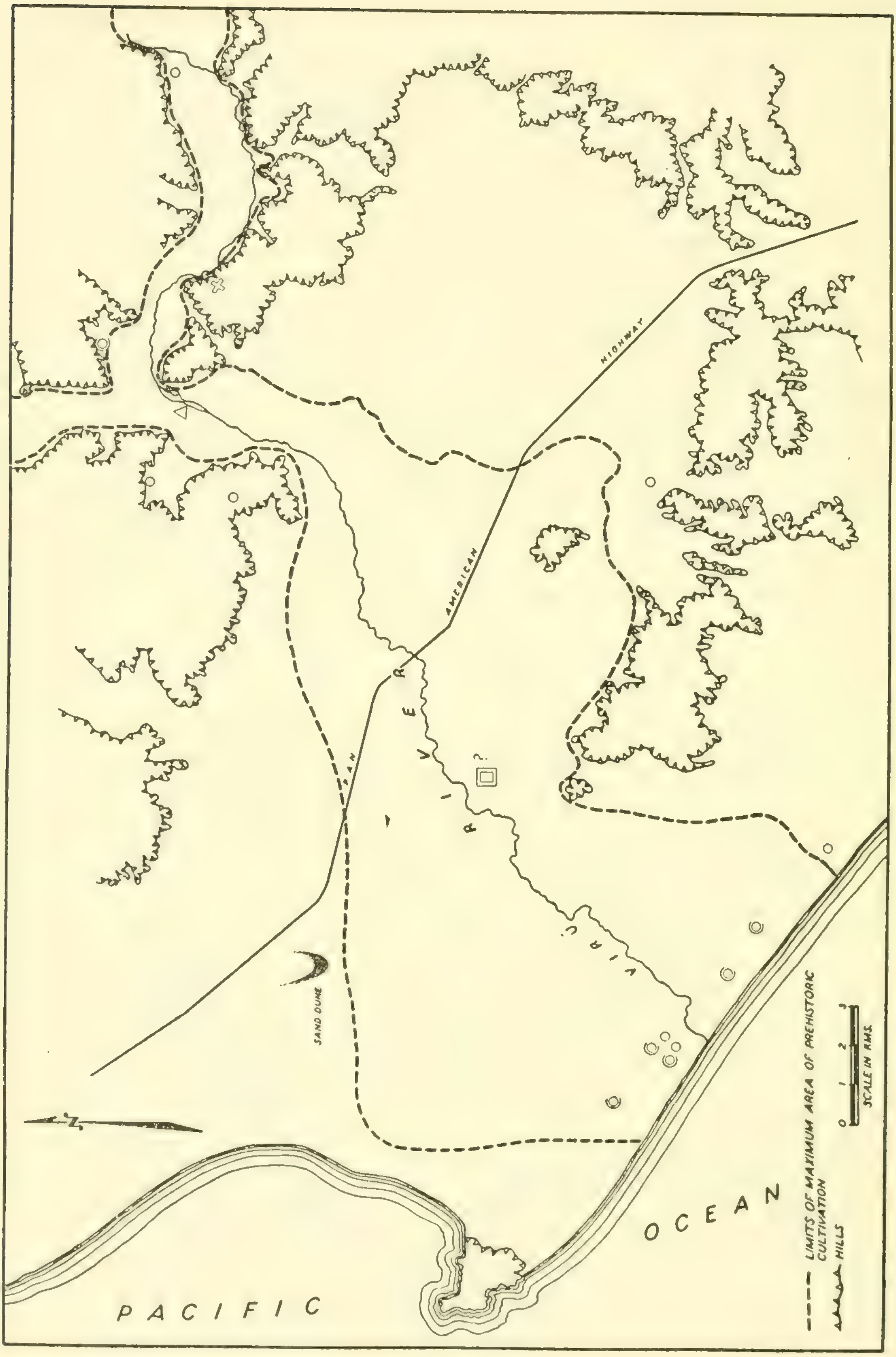
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FIGURE 88.—Suggested community patterns for the Estero Period.

smaller ones in the Lower Valley. Up the river, just below the Upper Virú-Huacapongo confluence, there is another important community assemblage centering around the big Pyramid Complex V–77 and the four Late Gallinazo castillos. The Gallinazo site (V–59) is a likely Valley "capital," although the castillos and V–77 may represent a co-equal or a slightly later center of power.

The nuclear type of community assemblage is retained, to a degree, in the Huancaco Period; and probably the principal Huancaco "capital" site is the mammoth V–88–89.

The great mound sites decline in Tomaval. There are possible assemblages of villages and mound centers in the Middle Valley and Huacapongo; but there are no outstanding Pyramid-Dwelling-Construction Complexes in the Lower Valley comparable to Gallinazo (V–59) or Huancaco (V–88–89). Instead, the biggest sites are Great Enclosure Compounds which may have been administrative centers. A trans-Valley road was probably built at this time which connected Virú with the valleys to the north and south.

La Plata and Estero Periods see a contraction of population with the greatest clustering of sites near the coast. These coastal sites may have been oriented toward the mound V–106 or the Great Enclosure V–171 may have been the administrative "capital" of Virú.

SETTLEMENTS AND SOCIETY

POPULATION

Population size and density are reflected in settlements and bear a direct relationship to food supply. In Virú, we have some knowledge of both prehistoric settlements and food-producing techniques. It is from these that we can make certain inferences concerning population.

The food economy of the Cerro Prieto Period was divided between fishing and cultivation-gathering. Marine remains from this early time are fish bones, sea urchins, mollusks, and sea mammal bones. Although the archeological record in the lower levels of the Huaca Prieta de Guañape is limited, the inventory from the comparable preceramic strata at the Huaca Prieta de Chicama gives us an adequate picture of this early agriculture (Bird, 1948 a, p. 24). Cultivated plants included gourds, squash, aji peppers, and beans (*Canavalia*). A number of tubers and fruits, probably gathered wild, were also found in the refuse.

We know of three Cerro Prieto coastal midden heaps, each approximately 200 meters in diameter and one of them of considerable depth. The possibility of other sites, buried by sediments in the Lower Virú Valley, cannot be excluded; but the importance of marine foods in the dietary pattern as revealed by the known sites suggests that the Valley's inhabitants of that period would not have settled far from the shore. It is doubtful if the population of the Virú Valley numbered more than a few hundred people during the Cerro Prieto Period. Populations of this modest size probably continued for several centuries.

It is unlikely that there was an appreciable population increase in the Early phase of the Guañape Period. For Virú, we have only a single definite site, one of the old village locations of the Cerro Prieto Period. From the Chicama Valley excavations (Bird, 1948 a), there are indications that Early Guañape food economy remained essentially unchanged from earlier times. Although ceramics appear (as the prime characteristic of the phase), maize was still unknown. Small coastal populations, partially agricultural but with a strong dependence on sustenance from the sea, are still implied.

In Middle Guañape there are the first signs of inland expansion. These are only slight, and the bulk of the population in Virú was probably still clustered around the old fishing centers. It is, though, undoubtedly significant that Middle Guañape is on the chronological horizon which is coincident with the beginning of maize in the Chicama Valley. The Late Guañape sites are more numerous than those of the Early and Middle phases and they are found in several parts of the Valley. Although it can hardly be thought of as a time of dense population, there is evidence for both an absolute increase and a wider distribution of the people in the Valley.

In the transition from Late Guañape to Early Puerto Moorin, there is a greater increase in number of sites than at any other point in the chronology of the Valley, and it is inescapable that Virú population took a sudden climb. Whereas there were 13 dwelling or midden sites in the Late phase of Guañape, including Guañape sites unplaced as to phase, there are 57 habitation sites of Early and unplaced Puerto Moorin. In addition, there are 19 Early Puerto Moorin mound, fortification, or cemetery sites in contrast to only 3 such "special" sites for Late Guañape.

The combination of a population increase and a territorial spread, particularly a spread toward the interior and away from the sea, is a strong argument for a dramatic change in food production. If maize were brought to Virú in Middle Guañape, and if new economic adaptations were being made in Late Guañape, then advanced stabilization of this important subsistence plant characterizes Early Puerto Moorin. Other domesticated crops may also have come into Virú at about this time as elsewhere in the Peruvian area. The frijol bean and the pepino show up first on this general cultural and chronological level (Bennett and Bird, 1949, p. 142).

On available dwelling-site evidence, alone, one could postulate a population decline in the subperiods following Early Puerto Moorin. Sites of the Late Puerto Moorin and Early and Middle Gallinazo phases are not as common, on the basis of our survey, as those of Early Puerto Moorin. This sudden reversal of the population trend is, however, unlikely, and another factor may be adduced to offer a more reasonable explanation for the lack of sites. This is a shift in settlement to which we have alluded before. Whereas the Early Puerto Moorin sites were most numerous in the upper sections of the Valley, most of those of the succeeding Late Puerto Moorin, Early Gallinazo, and Middle Gallinazo phases are in the Lower Valley flats. As this is the region of deep sedimentation and concentrated occupation of small dunes and earth-refuse hillocks, it is probable that many other sites of the same phases are underneath silt or later cultural refuse. If this interpretation is correct, and there was no abrupt decline in the number of Virú inhabitants but, rather, a shift in their area of habitation, what caused the shift? One possibility that immediately comes to mind is that changes in agricultural technology made it possible to utilize large areas of the Valley heretofore not exploited. This explanation follows in the wake of the interpretation that we made for the opening up of the upper Valley in Early Puerto Moorin. In both cases the inhabitants were exploring the potentialities of maize agriculture, and the key to the solution may be irrigation. If irrigation was introduced into Virú in the Early Puerto Moorin Period, it would be more likely that it was first put into practice in the narrower upper Valley, where the gradients were steeper and where it would have been easier and simpler to divert water into canal intakes and distributaries. Successful farming in the Huacapongo, based on irrigation, would have drawn settlers into this region. Subsequently, as experience in irrigation techniques developed, a more complex canal and distributary system would have come into being with the result that the basin of the Lower Valley would have been opened to irrigation farming. The much greater amount of suitable land in this part of the Valley would have, thus, attracted villagers in the ensuing Late Puerto Moorin and Early Gallinazo interval. Although there is no indisputable evidence that canal irrigation began as early as the Puerto Moorin Period, the probabilities are that it did. We know that by Late Gallinazo times full-scale Valley irrigation was in existence, and it is not beyond bounds to expect some previous experimental activity.

Another explanation for the occupation and subsequent desertion of the upper portions of the Valley from Early Puerto Moorin to Middle Gallinazo is concerned with defense, and, as such, is less involved with the factors of population and food technology. If the Early Puerto Moorin phase had been a time of military peril, the narrow quebradas of the Huacapongo would have offered advantages to the inhabitants not given by the open flats of the Lower Valley. There are some open Valley bottom sites in Early Puerto Moorin, but, as has been suggested in the previous chapter (pp. 376 ff.), the occupants of these villages probably banded together to construct the Bitín redoubt as a place of refuge. Although the presence of the Bitín redoubt implies that the Early Puerto Moorin phase was one in which fear of war and raids existed, and this is consistent with the movement of population into the upper quebradas at this time, there was a continuation of these war conditions after the close of Early Puerto Moorin. This is seen in the Cerro Piño redoubt which was occupied in the Late Puerto Moorin and Early Gallinazo phases, after the desertion of the Huacapongo quebradas.

Either the agricultural or the military defense interpretation is reasonable, but the former, concerned as it is with the spread and adaptation of maize horticulture and canal irrigation, is more directly in line with our discussion of the interrelationships of food production, population size, and settlement dispersal. The necessity for defense undoubtedly played a part in the determination of settlement formation, but, judging from the presence of fortified sites, this need was a fairly constant factor in all Virú periods following the Guañape.

The Late Gallinazo phase marks the achievement of the maximum prehistoric population for Virú. After this, population, seemingly, maintained itself during the Huancaco and Tomaval Periods. The Late Gallinazo peak is indicated, first of all, by the number of living sites which we were able to locate. Unlike previous periods, they are found in all parts of the Valley. They total 66, including Exposed Dwelling Sites, Earth-Refuse Mounds, simple midden areas, Dwelling-Construction Mounds, and Pyramid-Dwelling-Construction Complexes. The average size of the Exposed Dwelling Site of this period, as revealed in foundation outlines, is somewhat larger than that for the preceding Puerto Moorin period. The Dwelling-Construction Mounds of the Late Gallinazo phase are also larger than those of the earlier phases. Associated with some of the Pyramid-Dwelling-Construction Complexes are thousands of Late phase rooms or houses. These represent population aggregations much larger than anything previously known in Virú. Besides the dwellings, there are 4 Castillo Fortification Complexes, 3 Isolated Pyramid Mounds, and 12 of the pyramids within the Dwelling-Construction Complexes. Both the castillos and the big pyramids represent millions of man-hours of labor, dwarfing any constructions that had been attempted in the Valley prior to that time. Of equal significance in population calculations are the irrigation systems. The major canal lines were in operation at this time, and they embraced an area about 40 percent again as large as that under cultivation in Virú today (see fig. 4, p. 28).

There are 64 dwelling sites and numerous Pyramid Mounds and other special sites for the Huancaco Period. Land usage on the north side of the Lower Valley probably decreased somewhat, but this may have been compensated for by an expansion of irrigation on the opposite side of the river. For Tomaval times we have 79 living sites but fewer recorded special structures. The irrigation systems of this period were carried down closer to the beach, but the Lower Virú-North areas abandoned after the close of Late Gallinazo were not reclaimed. For neither Huancaco nor Tomaval is there secure evidence for postulating continued population increase. Huancaco dwellings number about the same as those of Late Gallinazo, and there was no more large-scale building than in the earlier period, if as much. There are more Tomaval village sites in our sample than for either of the other periods, but this is offset by a decline in monumental construction. Perhaps most significant is the fact that after Late Gallinazo there was little room for the expansion of irrigation and cultivation. In effect, a ceiling had been set by a maximum combination of the amount and availability of water and the amount and topography of the land. This ceiling on arable land was also a ceiling on population expansion without new food types or food transportation from outside the Valley.

For La Plata and Estero Periods, combined, we have record of only 33 living sites and very few special sites. Whereas Huancaco and Tomaval sites were found in all parts of the Valley, La Plata and Estero communities are clustered near the coast or in some of the upper quebradas of the Valley. The coastal cultivation plots, begun in Tomaval times, may have been in operation, although it is possible that these had diminished or been discontinued so that the population near the beach was dependent upon sunken gardens or *pukios*. The *pukio* system of farming would account for the grouping of sites nearer the beach, a phenomenon of the late periods. The remaining population centers in the upper quebradas could have been supported by a limited amount of canal irrigation much as the early experimental irrigation had sustained the Puerto Moorin villages in the same regions. In between, the heartland of the Valley, or much of it, may have lain fallow for lack of adequate canals. Such would surely account for the diminution of population reflected in the reduction of settlements in the La Plata and Estero Periods.

We have, thus far, ventured no figures on absolute population in prehistoric Virú except to surmise that the Cerro Prieto Period populations numbered no more than a few hundreds. This was an estimate based upon dwelling-site size, number of sites, and known technological level of food production. From Cerro Prieto times to Late Gallinazo there is evidence for a steadily expanding agricultural economy. By following old canal lines and settlements we have estimated that the Virú Valley of Late Gallinazo had 40 percent more land under cultivation than in 1946 (see fig. 4, p. 28). With 7,000 hectares farmed today, this would bring the total for maximum prehistoric cultivation up to 9,800 hectares. Various computations have been made on the amount of maize yield per hectare or per acre and upon the amount of maize needed to sustain one person. Kroeber (1939, p. 63) has suggested ratios of 1 person per acre for the eastern United States and for Mexico and of 1 person per half-acre for Perú (see also Steward, 1949, pp. 664–665). For Yucatan, the Ricketsons (1937, pp. 16–17) estimated 1 person per 0.7 acre. Using the more conservative ratio of 1 person to 1 acre, the maximum cultivation of 9,800 hectares in the Virú Valley gives us approximately 25,000 persons at any time during the Late Gallinazo Period.

If we are correct in our assumptions about the stability of population during the Huancaco and Tomaval Periods, the 25,000 figure would apply to them. Guañape and Puerto Moorin Periods are estimated at less, although there must have been several thousand individuals in the Valley in the latter period. Following Tomaval, the decline in the number of settlements noted for the La Plata and Estero Periods suggests a drop to perhaps one-half of the 25,000 figure.

SOCIOPOLITICAL ORGANIZATION

Some idea of the social control exerted in the old Virú societies may be derived from the settlement remains, as these exemplify community organization (arrangement of dwellings, villages, etc.), politico-religious authority (temples, palaces, public works, etc.), and warfare (fortified sites or works). These settlement remains, in an analysis of this kind, must be viewed in context, not only of the Valley and its chronological periods but of what we know of prehistoric Peruvian society as a whole.

On the early Cerro Prieto level there were a few coastal villages exhibiting relatively simple technologies. These technologies and their specific products indicate an historical relationship between these Virú communities and other coastal peoples, but there is nothing in this relationship to suggest multi-Valley political or religious organization. The same is true for Early Guañape. By Middle and Late Guañape times we have settlement evidence for special buildings and for the beginnings of what I have called a "nucleated community," two or more villages sustaining a "capital." In Virú, we have nothing to suggest the functional nature of these early "capitals" or special buildings, but elsewhere in Perú, at this time, the Chavín art style was being promulgated. As Chavín art is generally conceded to have a religious or "cult" quality (Bennett and Bird, 1949, pp. 123 ff.), and as the period of the Chavín diffusion is not characterized by evidences of warfare, the Chavín spread has been interpreted as a peaceful dissemination of a religious cult (Willey, 1948, p. 10). Such a context provides a background for temples; hence, the most reasonable interpretation of the Guañape Period community buildings of Virú is that they are temple sites.

Puerto Moorin society was organized upon a nucleated basis as was Guañape, but the assemblages were larger. The evidences of coordinated effort are also greater for Puerto Moorin than for the prior period. Big Hilltop Redoubts for defense were constructed, and Pyramid Mounds were built. Perhaps, although not certainly, extensive defense walls and irrigation canals were additional public works. The Pyramid Mound is the most likely structure to have served as a politcal or religious nucleus, and some of these were built within the Hilltop Redoubts and some in the open. There are no clues as to whether these mounds were religious or political edifices. The time of the Puerto Moorin Period follows the disappearance of the Chavín cult and is correlated with horizonal phenomena which suggest the diffusion of various technological ideas rather than religious symbolism (Willey, 1948, pp. 10–11; Bennett and Bird, 1949, pp. 137 ff.). By this token, it is unlikely that attitudes similar to those of the Guañape Period prevailed. The fortifications reveal the rise of militarism, a new and significant force. In brief, Puerto Moorin was a time of change and, as we have seen, of rapidly growing populations. With the new institutions of warfare and, probably, irrigation, centralized authority in essentially secular matters must have been greatly expanded over the Guañape periods; however, the expression of this authority could have continued under religious sanctions.

In Puerto Moorin, it is questionable as to whether the Valley was organized into a single state or whether it was divided into a number of petty tribal units corresponding to the nucleations or community assemblages. By the latter part of the following Gallinazo Period, there is little doubt on this score. The complex irrigation systems, extending from the canal intakes high in the Upper Huacapongo down to the coast, could have functioned only under a closely coordinated management. The mammoth building projects of this same Late Gallinazo Period also demanded a strong, centralized government or a tightly knit and amazingly smooth-running confederacy.

The great Pyramid Mound sites must have served as focal community points. These mounds may have been primarily religious or secular centers; however, as other data indicate a rising and highly competitive "nationalism" along the north coast and elsewhere in Perú at about this time, it is logical to suspect that war leaders were coming to the fore in Gallinazo society. The construction of the Castillo Fortifications, vast public works representing huge labor expenditures, would also support the hypothesis that war interests were becoming more influential as inter-Valley competition increased.

The first large population centers in the Valley date from the Gallinazo Period. These communities are composed of apartmentlike dwelling units, each unit consisting of dozens or hundreds of small, conjoined rooms. It has been estimated that several thousand people lived within two or three square kilometers. Such sites were urban concentrations, although they differ in lack of plan from the urban centers of the late periods of Perú, such as Chanchan. The massing of people in such tightly compacted groups, and the necessity for social control inherent in this situation, is further evidence of the governmental power and effectiveness in practical and mundane matters.

Settlement organization and architectural types remain much the same in the Huancaco Period as they did in the Late Gallinazo phase. The unusually large site of Huancaco, which has the appearance of an impressive Pyramid Mound joined to a palace complex, is the most probable "capital" for a unified Valley command during the period. This unified Valley command was probably in the hands of Mochica war leaders. Their presence and control is implied in the art style of the Huancaco Period which is pure Mochica. As Mochica culture had its rise and development in the Chicama and Moche Valleys to the north, its sudden presence in the Virú Valley, as represented by the fully developed style, can hardly be attributed to local development or even gradual borrowing. In the decorated grave pottery of the Huancaco Period, the old Gallinazo styles have been completely replaced by the Mochica ware; and at some of the Gallinazo Castillo Fortifications Mochica ceramics are found overlying those of the Gallinazo Period. The implications behind this abrupt change are more than those of cultural replacement; they signify political expansion of the Mochica, southward, into Virú. In the Huancaco Period Virú becomes a province in a multi-Valley state.

Settlement changes separate the Tomaval from the Huancaco Period, and these changes undoubtedly reflect social, political, and religious rearrangements. In the first place, the Tomaval Period is the local Virú variant of the Coast Tiahuanaco horizon. This "horizonal" influence is seen in a series of new art and ceramic styles which suddenly inundate the Mochica art. In a previous paper (Willey, 1948, p. 13), I have pointed to the highly "nationalistic" quality of Mochica vase painting and life-modeling. Mochica subjects include scenes of organized warfare, capture of prisoners, regal personages seated upon thrones, and much of the panoply of an autocratic, war-oriented state. The sharp truncation of this symbolism might possibly have been achieved without violent means, but it is highly improbable. More likely, in a power struggle along the north coast, the Mochicans were smashed by a more successful militaristic group; and Virú came under the sway of a new political order.

A de-emphasis of the Pyramid Mound and its function as a community assemblage nucleus in the Tomaval Period may be one expression of the break-up of an old politico-religious tradition which began in Virú with the Early Puerto Moorin Period and carried through Huancaco. It is certain that military strategy and tactics changed, probably as a result of the political turnover. The castillo strongholds were no longer thought necessary; on the other hand, big, high-walled compounds were constructed in the lower part of the Valley, and these could have been places of refuge, garrisons, administrative centers, or have served all three functions. In the dwelling communities, themselves, a new specialized plan became popular. This was a Rectangular Enclosure Compound within which rooms tended to be constructed in a more orderly arrangement than that followed in the agglutinated type village. The enclosure compound village was not an entirely new introduction to Virú, but it is most probable that the Coast Tiahuanaco "conquest," if it is accepted as such, was responsible for its sudden vogue. A more tightly organized, more formal community social structure than that previously known in Virú may lie behind it. For it seems certain that the physical arrangement of a community had a definite cultural value in Perú of the late prehistoric periods. The Inca, whose empire must have had roots in the political and social experimentation that had been going on for several centuries previous to their rise, were very conscious of it as a prestige point. Garcilaso (edition of 1869–71, vol. 2, pp. 137–140), in commenting upon the Inca conquest of the Province of Huamachuco, states, in referring to the inhabitants of that region:

> These people had no villages, but lived in scattered huts in the fields, without any order or social rules, like beasts.

"Order or social rules" were, thus, correlated with village patterning. Meticulous arrangement of dwellings is implied as civilized while the lack denotes a bestiality.

The enclosed or compound community unit of the Tomaval Period continues in the La Plata Period. Small mounds are constructed within some of these compounds. This might be interpreted to mean that certain religious functions, as symbolized by the mound, are now somewhat subordinated to the secular idea of community planning. In any case, the Pyramid Mound outside of the compound is a rare La Plata Period feature.

The La Plata Period in Virú is also the Chimu Period in the Valley's prehistory. The kingdom of the Chimu, or Chimor (see Rowe, 1948), was founded in the Moche Valley in the first half of the fourteenth century. Rowe (1948, pp. 39–40), following the Anonymous History of 1604, lists a ruler named Ñancen-pinco as the conqueror of the Virú Valley. This Ñançen-pinco, an ancestor of the Chimu ruler subdued by the Inca, held a domain reaching from the Saña to the Santa Valleys. Just prior to the Inca invasion of the Chimu realm, the entire coast from Tumbes almost to Lima was brought under Chimu power. Like the later Inca empire, Chimu, or Chimor, was a despotic state. It was also the great "civilized" nation of the Perú of its day. Rowe is of the opinion (Rowe, 1948, p. 46) that the Incas learned many technical refinements in the arts and crafts, mass production systems in goods, and the rectangular town or rectangular compound plan from the Chimu. It is also likely that many administrative ideas were borrowed from the more sophisticated coastal dwellers.

Urbanism is a feature of the Chimu kingdom, although there are no La Plata urban centers in the Virú Valley. It may be that Virú was too small an area to have supported a city comparable to Chanchan (the Chimu capital in the Moche Valley) or La Barranca (in Pascasmayo). It is interesting, however, that the Tomaval and La Plata Period enclosure compounds have a resemblance, in miniature, to the big Rectangular Enclosures of the Chimu cities. This suggests that a similar social structure may have prevailed for both and that in the great urban centers this social structure was magnified to accommodate an enlarged population just as the Compounded Villages were expanded and multiplied to create a metropolis such as Chanchan.

The Chimu regime fell before the Inca sometime in the second half of the fifteenth century. The Inca administered the former Chimu Provinces within the pattern set down by the Chimu rulers, and the descendants of the old royal line of Chanchan retained the throne under Inca sovereignty. There was little cultural change, and, as Rowe (1948, p. 46) says, "by archeological evidence alone it would be very difficult to establish an 'Inca period' in the area [north coast]." In the Virú settlements this is seen in the retention of the patterns initiated in Tomaval and carried on in La Plata and Estero.

THE VIRÚ VALLEY IN PERUVIAN PREHISTORY

The valleys of the Peruvian desert coast are semi-isolated units, and each has a history peculiar to itself. Yet we have seen, at several points, that the development of the Virú settlements cannot be fully appreciated solely within the confines of the Valley. The tides of human events affecting all of the Peruvian coast and Andes flowed and ebbed across Virú for many centuries. We turn now to examine prehistoric settlement types and trends elsewhere in the Peruvian area and to compare these with those we have studied in detail in the Virú Valley.

On our earliest level, the Cerro Prieto Period of the preceramic fishers and early agriculturists, there is very little comparable information from other Andean regions. Outstanding, of course, is Bird's (1948 a) Chicama Valley work to which we have already referred. In the Chicama the dwellings parallel closely the subterranean houses of Virú. There are no mounds or special buildings at the Cerro Prieto Period sites or at Huaca Prieta in the Chicama Valley. Southward on the coast, at Aspero, Puerto de Supe, there is a coastal midden, similar in appearance to the Virú and Chicama preceramic stations, which has a simple, rock-walled, multiroomed structure. Within the largest room of this building there are two rectangular, clay-covered platforms which suggest altars (Strong and Willey, 1943, p. 12). This Aspero "temple" may equate chronologically with the preceramic periods in Virú and Chicama, or it may be later. It is a "possible" religious or community structure for this early horizon.

The Guañape Period in Virú marks the beginning of pottery and its Middle and Late phases correspond to the Chavín horizon. Sites of the Chavín epoch tend to be found along the seashore, in small quebradas opening off the major Valley bottoms, and in relatively small, obscure highland basins. These marginal locations imply an imperfect control of irrigation and agricultural techniques. This ecology apparently tallies with Virú. Guañape Period houses were small round or square units consisting of one or a few rooms with unworked stone foundations and conical adobe walls. The arrangement of buildings was scattered or haphazard. This Scattered Small-House Village compares favorably with the Cupisnique dwellings of the Chicama region. Larco Hoyle (1941, pp. 115–123; see also Bennett, 1939, pp. 90 ff.) describes Cupisnique houses in the Pampa de los Fósiles, on the hill slopes by the

Mocán road, and at Sausal, Barbacoa, and Palenque as having rectangular and circular foundations of rough stones and being small-unit, scattered dwellings. At Barbacoa, conical and truncated conical adobes were used by the Cupisnique peoples, and Bird's (1948 a, pp. 26–27) Cupisnique Period houses near the beach in Chicama were constructed of conical, hand-made adobes. At similar Chavín horizon coastal sites farther south, houses and villages of the same kind are reported. Uhle's (1925, p. 261 ff.) and later (Strong and Willey, 1943; Willey and Corbett, n. d.) comments on the shell-mound sites at Puerto de Supe mention crude stone foundations of small buildings. Tello (1943, pp. 150–151), in generalizing about Chavín structures of the coast, remarks that the "minor buildings or houses" are circular or rectangular heaps of stones or small hillside terrace foundations. Only in the highlands do we have a suggestion of a type of dwelling distinctly different from the Virú Valley Guañape Period small-house village. This is at Chavín de Huantar where Bennett (1944, p. 94 ff.) uncovered a row of attached, carefully arranged, rectangular cell-like rooms. These were at some little distance from the complex of temple or ceremonial buildings at the site, and it is possible that they are dwellings.

The putative "temples" or "community buildings" of the Guañape Period in Virú are extremely simple rectangular buildings of large size. These do not seem to enclose any features of consequence, although they have not been fully and carefully explored by excavation. In this simplicity of public constructions, Virú assumes a somewhat intermediate position between Chicama, Nepeña, Casma, and Chavín de Huantar, on the one hand, and such other Chavín horizon sites as Early Ancón or Early Supe. Whereas the former have elaborate temple structures, the latter have no outstanding buildings.[61]

Tello (1943, pp. 138 ff. and pp. 150–151), in commenting upon the Casma and Nepeña Chavín temples, refers to a number of features which he considers typical of these and related buildings. Among them are platforms of different heights, communication between platforms by shafts, and relief and painted wall decorations. Further, he states that the major Chavín buildings of the coast are of "a more or less uniform type." This type has a rectangular enclosure, a main building of two or more platforms situated in the center of the enclosure, a conical adobe building on the top platform, and some minor structures within the area of the enclosure. The Virú community buildings resemble this description only in the rectangular enclosure wall.

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[61] A possible exception would be the Aspero "temple," mentioned above, depending upon how this site is placed chronologically.

Bennett (Bennett and Bird, 1949, pp. 131–132), with the Casma and Nepeña examples also in mind, has characterized the Chavín horizon religious architecture of the coast as incorporating platforms with ascending steps, rooms, clay columns, polychrome frescoes, and relief carvings. In this characterization, the idea of a pyramid or high, terraced platform mound is not predominant. Schaedel (personal communication, 1951) takes a similar position, considering the Chavín horizon temple of the coast to be, essentially, a complex building on a low platform. These buildings were roofed, and their dark interior rooms and passages had a labyrinthine quality reminiscent of the temple at Chavín de Huantar. The analogy is suggestive, for, certainly, Chavín de Huantar is not a pyramid-mound site. For there, the massive platforms, arranged around a central court, are actually stone buildings with interior rooms and galleries on several floor levels (Bennett, 1944, p. 94).

Yet, in apparent opposition to this concept, there are coastal sites, probably of the Chavín time horizon, which look like Pyramid Mounds. The Huaca Pukuche, in the Chicama Valley, is such a pyramidal-type mass, and may date from the Cupisnique Period (Larco Hoyle, 1938–39, vol. 1, p. 34; 1941, p. 115 ff.; Bennett, 1939, pp. 86–87). The central core of this structure is constructed of conical adobes; but rectangular cane-marked adobes have been placed over and around this central portion, so it may be that the ultimate flat-topped pyramidal shape derives from later rebuilding. Cupisnique potsherds have been found within the conical adobes, and Mochica sherds on the mound surface. In the Nepeña Valley the Coastal Chavín temples of Punkurí and Cerro Blanco show a similar structural superimposition. The Cerro Blanco site (Bennett, 1939, p. 16; Larco Hoyle, 1941, pp. 9–10; Tello, 1943, pp. 136 ff.) is a mound 15 meters high. It stands in the cultivated valley bottom, and the lower portions have been surrounded with sediments. Stratification is threefold. The buildings of the first and second levels pertain to the Chavín style, with the lower being made of stone and mud plaster and the second of conical adobes. The first level building is a low platform connected by stairs to a higher platform. On this higher platform are rooms with decorated walls. The structural conformation of the second level, the one of conical adobes, has not been described; but the third level building is, presumably, related to the Mochica occupation of the valley and is a rectangular adobe Pyramid Mound. The situation at Punkurí is similar to Cerro Blanco (Bennett, 1939, pp. 16–17; Tello, 1943, p. 136 ff; Larco Hoyle, 1938–39, vol. 1, pp. 32–33). The original Chavín horizon structure was a low platform 19.8 by 5 meters in extent and only 2.4 meters high. Back of this platform a stairway leads up to a higher level on which there is a building. A conical adobe mantle overlies this temple, and a third coating of rectangular adobes gives the mound its final pyramidal appearance.

There are several mound sites in the Casma Valley which may belong to the Chavín horizon. Pallca, which has the best ceramic documentation (Collier, personal communication, 1950), is a stone-faced, stepped pyramid of rectangular outline, measuring some 105 by 222 meters across and 25 meters high. Excavations in nearby refuse showed Coast Chavín style pottery. On the summit of the large platform are two stepped pyramids made of rectangular adobes which may be later superimpositions. If, however, the great, stone-covered mound is correctly dated by the nearby pottery dump, the trait of building huge flat-topped Pyramid Mounds must be dated back to the Chavín horizon in the Casma Valley. Moxeke (Collier, personal communication, 1950; see also Carrion, 1948, p. 110, pl. 6, fig. 1), like Pallca, is a massive flat-topped platform, some 30 meters in height. It is stone-faced, but the upper terrace on the front side is made of conical adobes. Twelve niches on this terrace face contain mud sculptures which are clearly in the Chavín style (Tello, 1943, pl. 13, *b*). For the two remaining mounds the evidence associating them with the Chavín period is less convincing. Cerro Sechín, the most famous (Tello, 1943, pp. 139–150; Kroeber, 1944, p. 48; also Collier, personal communication, 1950), is a series of platforms, the lowest of which is earth and rubble faced with the famous carved stones while an upper platform is of conical adobes. The ceramic associations of Cerro Sechín are most confusing, and the stone carving style is not generally recognized as Chavínoid. The last mound, Sechín Alto, is the largest of any here considered, measuring 300 by 250 meters with a height of 35 meters (Collier, personal communication, 1950). It is stone-faced and stepped in terrace fashion. On the summit are two smaller platforms, one above the other. The core fill of the main pyramid is of conical adobes. The total pyramid is enclosed on three sides by a stone wall. Within the compound so formed are several stone-faced platforms and the foundations of stone-walled rooms. On the fourth side of the big pyramid is another, smaller stepped pyramid of apparent similar construction. Unfortunately, there is no ceramic dating on Sechín Alto. Its appearance, the stone cover, the great size, the different levels, and the associated structures suggest the mound V–77 in the Virú Valley. It will be recalled that the fill of one of the platforms at V–77 was composed of conical adobes, and the stone retaining walls at that site, with alternate courses of stones placed on edge and laid flat, is duplicated along the northwest side of the base of Sechín Alto. The V–77 mound has a ceramic dating of Late Gallinazo, although it is quite possible that parts of it, or all of it, were constructed earlier.

To conclude with the temples or mound structures of the Chavín horizon, we can say, quite definitely, that platforms of stone, mud, and conical adobes served as bases for buildings on the north coast. In the highlands, platforms constructed of stone had interior rooms and galleries. On the coast, it is possible, and even probable, that large pyramidal mounds were built at this time. In the Virú Valley, there are no mounds of this sort that can be attributed to Guañape, the period which corresponds to the Chavín time horizon. Neither are there the temples on low platforms such as the first level buildings at Punkurí or Cerro Blanco. It may be that Virú, at this time, was an unimportant community, relative to Chicama, Nepeña, or Casma, and that it could not sustain an impressive ceremonial building. Or, perhaps, the more elaborate Guañape Period structures are buried beneath the mud of the Lower Valley bottoms or are covered by the mounds of later populations.

For the Peruvian area as a whole, the White-on-red time horizon is less well known than the preceding chronological horizon marked by the Chavín style. Fewer sites have been studied, and it may be, as Bennett has suggested (Bennett and Bird, 1949, p. 152), that important shrines or temples are rare for this period. The Virú data, though, indicate otherwise. Several small to medium-sized flat-topped Pyramid Mounds of conical adobes, tapia adobe, earth, or rock seem to be associated with the Virú equivalent of the White-on-red horizon, the Puerto Moorin Period. In the comparable Salinar Period of the Chicama Valley, mounds of this same type have not yet been identified, but south of Virú, on the coast, there is evidence for small platform mound building on the White-on-red horizon in the Chancay Valley. There, at the site of Baños de Boza, a small, solid structure of hemispherical or dome-shaped adobes was discovered under conditions of good ceramic identification and dating (Willey, 1943, p. 184). Much more investigation is needed on the problem of the pyramidal or platform mound in the White-on-red Period just as detailed excavation and study of the Coastal Chavín and Cupisnique mounds must be carried out before the development of ceremonial buildings for these early periods is made clear.

The Puerto Moorin Period dwellings which we described from Virú were largely Scattered Small-House Villages, Irregular Agglutinated Villages, and simple midden and Earth-Refuse Mounds. There are no dwelling-site data from the Chicama Valley for the Salinar Period, but, again, in the Chancay Valley, the Boza site (Willey, 1943, p. 184), referred to above, has a dwelling cluster. These dwellings are small, conjoined rooms with walls made of hemispherical adobes. They are compactly grouped around the mound platform with the whole site occupying an old sand dune. The situation suggests the Dwelling-Construction Mounds, or Pyramid-Dwelling-Construction Complexes, of the Virú Gallinazo Period, although this dwelling-construction type of village unit probably existed in the Lower Virú Valley in Puerto Moorin times as well as in later periods. The Dwelling-Construction and Earth-Refuse type of site in the Chancay Valley, dating from the White-on-red Period, has also been given brief mention by Uhle (1926, p. 303). In speaking of the small mounds of boulders and earth on the plain of the valley floor, he notes that many of them are artificial and contain interior walls of round lump adobes as well as White-on-red pottery.

Elsewhere in Perú, on what is generally conceded to be the chronological equivalent of the White-on-red horizon or the latter part of the Formative Stage, the dwelling sites that have been described are, mostly, small subterranean or semisubterranean rooms. These have been reported for the Paracas Cavernas culture of the south coast, for Huaraz in the north highlands (Bennett and Bird, 1949, p. 145), and for Chanapata in the central highlands (Rowe, 1944, pp. 14–15). Although we recorded no subterranean dwellings for the Puerto Moorin Period in the Virú Valley, their common presence in the Early Gallinazo Period, plus the fact that houses of this kind were known as early as Cerro Prieto, makes it likely that they were in use in Puerto Moorin, particularly in the lower part of the Valley. At Chiripa, in the south highlands, there are above-ground dwellings. These are small stone and adobe houses of one main room. Each house stands apart as a unit, but a group of 15 were found arranged around a central courtyard (Bennett, 1936, pp. 420 ff.; Bennett and Bird, 1949, p. 145). This pattern is not known from Puerto Moorin or any of the early periods in the Virú Valley.

One significant settlement feature of the Puerto Moorin Period in Virú is the fortification or Hilltop Redoubt. The two Virú sites of this type, V–80 and V–132, which date securely as of this period, have no known counterparts on this early time level in other regions of Perú. In general, fortifications have not been identified with either the Chavín or the White-on-red horizons. Middendorf (see Kroeber, 1944, pp. 52–53) believed the walled hilltop of Chancaillo, in Casma, to be of Chavín Period origin; but Donald Collier (personal communication, 1950), who examined the site and the pottery found there, identifies it as Late Coastal. However, I am of the opinion that continued field investigations will reveal fortified sites or refuge stations for the White-on-red Periods.

The Gallinazo Period in Virú is thought to correspond chronologically, and, to a large extent, developmentally, with the cultures and periods of the Late Formative and Early Classic Stages. The Negative Painted pottery style, the hallmark of Gallinazo, effects a correlation with a comparable period in the Chicama Valley which subsequently merges with an early Mochica; south along the coast there is negative pottery in the Santa Valley, in the Interlocking Periods of the Chancay and Rimac Valleys, and in the north highlands Classic Recuay is firmly linked to Gallinazo by the negative painting trait as well as other items. For the far south coast and highlands the correlations are less secure, but there are some negative painting elements in both Paracas Cavernas and Nazca pottery. In the southern interior there is no negative ware at either Pucara or in Early or Classic Tiahuanaco, but other correlations suggest their time equivalence with Gallinazo (see Bennett and Bird, 1949, p. 112; Willey, 1948, p. 9).

Although I have nothing on house sites of this period for the Chicama, there remains the problem of distinguishing between a Gallinazo or Negative Painted Pottery Period and the Mochica culture of that valley. Bird's discovery of a negative pottery stratum, overlying the preceramic deposits at Huaca Prieta de Chicama, demonstrates the reality of a Gallinazolike period in the Chicama. In the Chancay Valley the houses of the Interlocking Period were constructed of hand-made hemispherical adobes, tapia adobe poured in thin walls, and rough rock walls (Willey, 1943, p. 172). These building materials were used contemporaneously as were the ball-adobes, tapia, and stones in Gallinazo of Virú. The Chancay settlement pattern seems to have been agglutinated and probably was irregular. Both Uhle (1926, pp. 295–296) and I observed close-spaced or conjoined rooms of rock and adobe literally covering the seaward side of the Cerro de Trinidad, an area 200 to 300 meters square at a minimum. The close-packed Gallinazo Group dwellings of Virú come immediately to mind by way of comparison. In the Rimac Valley, Jijón's excavations at Maranga revealed in the lowest levels an Interlocking stylistic period associated with rows of small, conjoined rooms (Jijón y Caamaño, 1949, pp. 483 ff.). These rooms had hand-made, rectangular adobe walls. Five phases, in all, were defined for what are usually referred to as the Interlocking and the Early Lima Periods of the central coast. Each phase consisted of adobe-walled structures which were, in turn, filled and overlaid by later buildings. Beginning with the third phase, mold-made rectangular adobes replaced the hand-made blocks. The Maranga structural stratigraphy has a close parallel in the adobe-walled rooms of the Gallinazo sites which Bennett excavated in Virú. The replacement of hand-made adobes by mold-made forms also duplicates the changes that went on in the Gallinazo subsequence.

Below the Rimac, on the coast, there is only scattered evidence of dwellings or constructions, but these correspond with the Negative Horizon periods of Virú, the Chancay, and the Rimac. In the Lurin Valley, at Pachacamac, walls of small hand-made rectangular adobes are associated with the Interlocking pottery style (Strong and Corbett, 1943, pp. 45, 82). In the Chincha Valley, Uhle (1924 a, pp. 81 ff.) found "small chamberlike partitions, resembling narrow passages like those of a house" in the Huaca Alvarado. These chambers had been filled and used as a platform for superimposed structures, and Uhle interpreted this as a special crib-type of construction. In the light of what we now know from Gallinazo and from Maranga, it is more reasonable to suspect that these small agglutinated rooms were lower levels of a Dwelling-Construction Mound. Unfortunately, the Huaca Alvarado is not dated; but there are limited ceramic and textile clues which tend to identify it with an early period, antedating the Chincha Late Periods. Ball-type adobes used in the construction of the rooms, and of the mass of the huaca, support this tentative early dating. In the Nazca region, small, ball-type adobes were used in the Classic Nazca culture (Uhle, 1924 b, p. 130) and subterranean rooms lined with stones and hand-made adobes were found with the Paracas Necropolis style (Bennett and Bird, 1949, p. 159).

Highland Recuay sites, of a probable contemporaneity with Gallinazo, show similarity to the Virú Valley in subterranean construction; but the villages are not as large and do not contain great numbers of agglutinated rooms. The Recuay structures are gallerylike, varying from 7 to 20 meters in length and containing several small rooms (Bennett, 1944, pp. 53 and 104). Subterranean chambers, claimed to be dwellings, are also reported from Tiahuanaco (Posnansky, 1945, pp. 113–117).

In the Gallinazo Period two of the principal categories of special structures were large rooms or courtyards with decorated walls and Pyramid Mounds. On the central coast both the mounds and the courtyards occur with Interlocking-Early Lima ceramic styles. In the Chancay Valley, Uhle (1926, p. 302–303), in describing the excavations in the Cerro de Trinidad, Site E, tells of a painted wall 23 meters long and 1.6 meters high. This wall, which was buried, was made of "lump-adobes" and decorated with an interlocking fish design in four colors; thus, both the adobe type and the wall decoration certify its cultural provenience. From the descriptions, the painting and the design may be likened to the wall terrace paintings on the stepped pyramid of the Temple of Pachacamac, a structure probably belonging to the Interlocking-Early Lima interval of central coast prehistory. Uhle described the Cerro de Trinidad wall as being the western side of a small, terracelike building which had been erected over an artificial base 2.6 meters high. This sounds very much like a small adobe pyramid, and this supposition is strengthened by his reference, a little farther along, to a templelike construction with traces of terracings some little distance away. I tested still another artificial-mound-type structure at the same site (Willey, 1943, p. 139). This was a small rectangular platform composed of debris and sand but capped with a thick layer of tapia adobe. At the Maranga site there is suggestive, but not definite, evidence for Pyramid Mounds in Jijón's second and third phases. However, in the fourth phase large pyramids of rectangular mold-made adobes, similar to the pyramids of Virú Gallinazo, were erected, and large rooms with plastered and painted walls were an additional feature (Jijón y Caamaño, 1949, p. 483 ff.).

It is generally conceded that pyramid building was a trait that did not go south of the Lurin Valley on the pre-Tiahuanaco time level.[62] This may be so, and it is certain that the custom, if it did exist in the southern valleys, was not as popular as in the north. We should, however, approach the question with caution. Again, Uhle's (1924 a, pp. 81–86) Chincha explorations should be re-examined. The Huaca Alvarado, which we have mentioned in connection with agglutinated adobe room constructions, may be nothing more than a sprawling dwelling-construction mound mass; on the other hand it is possible that this site contains a pyramid or platform. Another Chincha site, which is made of the small lump-adobe, and which may be pre-Coast Tiahuanaco, is the Huaca Santa Rosa. This huaca, too, is somewhat shapeless; but it is 40 meters high, and if only a part of this height is artificial it may be a Pyramid Mound comparable to those of Gallinazo or Interlocking-Early Lima.

In the highlands, the ceremonial structures of Recuay, Pucara, and Tiahuanaco are in another tradition, or traditions. Around Recuay there are two- and three-story stone buildings, situated on low raised platforms, which are not related to the mound idea as much as they are to the old highland Chavín concept of a platform with interior galleries and rooms (Bennett and Bird, 1949, pp. 160–163). The Pucara temple is not a mound but a sunken court surrounded by small, stone-walled compartments, each containing an altar (Kidder II, 1943, p. 5). At Tiahuanaco there are no artificial pyramids of the type found on the north or central coast. The Acapana may, however, have served some of the same functions. It is a dressed and terraced natural hill. Other Classic Tiahuanaco temple sites in the South Titicaca Basin are often raised on terrepleins, but these are not mounds in the same sense as those of Gallinazo or Maranga. Their typological affiliations are, rather, with the building on a low platform or the galleried platform of the Chavín horizon.

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[62] Kroeber (1930, pp. 64–65) mentions pyramids in Chincha but seems to be referring to those of the later periods. He also refers to miniature pyramids, or "mastabas," at Nazca, but it is not clear if these are early or late.

In this survey of special buildings of the Late Formative and Early Classic Stage we have, so far, omitted the region of the largest pyramid structures in Perú, the Moche and Chicama Valleys. It has been traditional to consider all of the large, more or less isolated huacas of these two valleys as belonging to the Mochica culture. They are built of small mold-made adobes, plain or cane-marked, and adobes of these types are usually associated with Mochica building. Also, near many of these pyramids there are fields of Mochica burials. Prior to the Virú Valley expedition, it was also generally believed that the big adobe mounds of that Valley were purely of Mochica date and origin; but for Virú our ceramic records now tell us differently. True, there was an appreciable amount of pyramid building in the Huancaco (Mochica) Period; but there was an equal, or perhaps greater, amount in the preceding Gallinazo Period. It is, thus, quite possible that many of the Pyramid Mounds of Moche and Chicama, heretofore dated as Mochica, were actually built in Gallinazo-Negative times. Perhaps this will be less so than in Virú, for the Mochica culture is believed to have had deeper roots in Moche-Chicama than in Virú and in its earlier phases to have paralleled Gallinazo development. In any case, it is safe to assume that Gallinazo Period mound building in Virú had its counterpart in Chicama and Moche, whether under the Mochicans or their predecessors of the Negative Painted pottery. By the same token, castillo-type fortifications of Moche-Chicama undoubtedly equate with and are related to those of the Gallinazo-Huancaco Periods of Virú.

In spite of the fact that the Mochica culture is the best known on the north coast of Perú, there is very little information on dwelling sites; hence, we have little with which to compare the Huancaco Period house types and villages of Virú. Larco Hoyle (1945 c, p. 6 ff.) describes Mochica dwellings of the Chicama as consisting of various rooms and being grouped around patios. Such a description fits the Huancaco Period site V–14, which we have classified as a Regular Agglutinated Village. We know, too, that Irregular Agglutinated Villages continued in the Huancaco Period and that these agglutinations were similar to those of the preceding Gallinazo Period. It is possible that such was the trend in the other north coast valleys. On the central coast, these closely packed "honeycomb" room arrangements, noted for the Interlocking Period, apparently also characterize the Early Lima culture of the Rimac which is believed to equate with Mochica. Elsewhere, the only data that would pertain to the problem have been reviewed in connection with Gallinazo comparisons; and, at the present state of chronological refinement in Peruvian archeology, Gallinazo and Mochica can be treated largely as a single unit for long-range comparisons.

Massive architecture of Mochica in the Moche and Chicama Valleys has received considerable attention. The structures, methods of building, and materials are similar or identical to those used in Virú in the Late Gallinazo and Huancaco Periods.[63] The great Mochica edifices are constructed of mold-made rectangular adobes, either plain or cane-marked. Quite often they are set upon foundations of carefully laid but unworked stone. Algarroba poles and beams are used as supports or binders within the construction. Solid masses, such as pyramids, were built sectionally.[64] Kroeber (1930, p. 60), in describing the interior of the Huaca Cortada, Chicama, states:

> (It is) built up of a series of high and thick juxtaposed walls, each consisting of a series of juxtaposed rectangular columns.

This sectional-type construction is also noted in free-standing walls.

The Mochica buildings are of three principal classes, as are those of the Huancaco Period in Virú: pyramids, palaces, and fortifications. Structures of the first two classes are sometimes found together and compose what Schaedel (n. d.) has called the "Ceremonial Center." Mocollope, in Chicama, is such a center. There are several Pyramid Mounds at this site associated with terraced platforms divided into internal rooms. The Moche site, in Moche Valley, is another. The enormous Huaca del Sol is a huge platform surmounted by a pyramid. Its total height and bulk is the greatest of any artificial mound in Perú. A river cut reveals it to be a solid adobe mass constructed in the sectional columnar manner described. Kroeber (1926 a, p. 13) notes that there is none of the partition-wall-and-fill construction in the interior of the mound such as characterizes the Aramburú (Maranga) pyramids of the Rimac Valley. This filling of old clustered rooms in order to create a platform mass for a mound is characteristic of the Gallinazo Period of Virú as well as the Interlocking-Early Lima cultures of the Rimac, and it may be an earlier building technique no longer in vogue in Mochica times. Five hundred meters distant from the Huaca del Sol is the other building of the Moche site, the famed Huaca de la Luna. La Luna (Kroeber, 1925 a, pp. 193 ff.) is built against a hill slope as a series of connected platforms. Upon and within the platforms are large rooms of the "palace" type, and it was within this complex that the well-known Mochica-style painted frescoes depicting the "Revolt of the Artifacts" was found. The main platform at La Luna is 80 by 60 meters in extent and 21 meters high on the front side. The three free-standing sides are bordered by six steep narrow terraces. On the fourth side the platform abuts on the hill slope. The architectural type here is clearly related to the high terraces and big rooms of the Huancaco site V–88–89 in Virú and also to the Palacio de Sarraque, V–75. At Huancaco (V–88–89), the principal difference is that the pyramid is architecturally incorporated within the palace group while at Moche the pyramid and terraced hillside palace are not contiguous.

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[63] As inferred above, many of the so-called Mochica buildings may be Gallinazo-Negative in date.

[64] Larco Hoyle (1945 c, pp. 6 ff.) lists the circular adobe column and the arch as two Mochica architectural features. Neither of these is common, however, and we did not observe them in Gallinazo or Huancaco buildings in Virú.

Besides the ceremonial centers, there are numerous Mochica isolated pyramids, such as the aforementioned Huaca Cortada, the Huaca Cartavio 1, and the Huaca Blanca (Kroeber, 1930, pp. 84–85). Some of these have wall systems and cemeteries nearby, and the Huaca Cartavio is in the middle of a large walled quadrangle. This association of Pyramid Mounds and Pyramid-Dwelling-Construction Complexes with enclosing or related walls is first noted in the Virú Valley sequence in the Huancaco Period.

The fortified strongholds of the Mochica in the Chicama and Moche Valleys have never received the attention bestowed on those of Virú, and there seems to be no survey as to how numerous castillo-type structures are in the hearth area of the Mochica. That they do exist is certain. Larco Hoyle (1945 c, p. 6 ff.) generalizes about fortifications by saying that they are strategically placed, are surrounded by outer walls that constitute a first line of defense, and have smooth high interior walls. Kroeber (1944, p. 71 and pl. 31, top) briefly describes and illustrates a specific one, the adobe structure atop the rocky summit of Facalá in Chicama. This site is presumed to be Mochica, and its appearance is quite similar to that of the Late Gallinazo and Mochica castillos of Virú.

For Virú, we have argued that the principal irrigation systems of the Valley were in full operation by Late Gallinazo times and that they probably were continued, albeit with some modifications, through the Huancaco Period. In Chicama and Moche the lack of knowledge concerning a Gallinazo-Negative Period makes it difficult to appraise the pre-Mochica public works, but it is fairly certain that great canals were functioning during the Mochica Period.[65] The most spectacular of these is the canal running along the adobe aqueduct of Ascope (Kroeber, 1944, pp. 71–72; Larco Hoyle, 1946, pp. 162–163, pl. 72, *top*). This tremendous work is 1,400 meters long and has a cubic content of 785,000 meters of earth and adobes. In addition to the canals, walled roadways are attributed to the Mochica (Larco Hoyle, 1945 c). These roads are very much the same as the trans-Valley road in Virú for which I have offered the speculative date of Tomaval Period (Coast Tiahuanaco).

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[65] Plate 57, *bottom,* shows extensive cultivation plots in the Santa Valley thought by Larco Hoyle to be of Mochica origin.

Ceremonial and public architecture related to that of the Mochica may be found in the valleys north of Chicama, although the cultural chronology for this region is still largely in the realm of guesswork. Schaedel (n. d.) lists the Huaca de los Dos Cabezas in the Jequetepeque Valley as a cluster of Pyramid Mounds of the Mochica ceremonial center type but can offer no reliable ceramic dating for the site. He observes that other similar sites are found in the valleys still farther north, and that these, too, are undated. South of Chicama, Moche, and Virú there is ceramic evidence of full-blown Mochica occupation as far as the Nepeña Valley. Tello (1943, pp. 138 ff.) states that the Mochica pyramids in the Nepeña are built in tiers of adobes, that they are associated with large rectangular rooms, and that the rooms have painted frescoes. This description accords with the Chicama-Moche-Virú sites.

The sudden break-up and disappearance of the Mochica ceramic style of the Huancaco Period in Virú has been correlated with significant changes in both the domestic and politico-religious-military architecture. The new architectural forms and settlement types seem to come with the advent of the Coast Tiahuanaco styles as represented by the Tomaval Period in Virú. Outstanding among the changes in site types are the decline of interest in the great pyramids or pyramid-dwelling-palace ceremonial centers, the abandonment of the castillo-fortifications, and the appearance of the planned enclosure or compound community. These are trends which have been noted, as generalities, before, but they have usually been associated with the advent of the subsequent Chimu or "City Builder" epoch of north coast prehistory (see Bennett and Bird, 1949, pp. 201 ff.). One of the most important revelations in the Virú data is that these changes in community types seem to have their inception with the arrival of the Coast Tiahuanaco influence. The question now clearly presents itself: does Tiahuanacoid influence in other regions of Perú correlate with sudden and drastic settlement changes. The usual lament, the lack of sufficient controlled data from other valleys and regions, bars an effective and final answer to this question. We can, however, point to certain interesting facts which may throw some light on the matter.

In the Moche Valley, the great site of Chanchan, which is the epitome of the new community on its most vast and elaborate scale, is the traditional capital city of the Chimu kingdom. There is no doubt that Chanchan was occupied and much if it built in the Chimu Period, yet there is also very good evidence that the site was used in the Tiahuanacoid Periods. Bennett (1939, pp. 82–83) cites Black-white-red, Black-white-red Recuoid, and the Red-on-white Chanchan style as all having been found at Chanchan, and these ceramic types are markers of the Coast Tiahuanaco chronological interval. These facts do not prove that the Coast Tiahuanaco Period at Chanchan was characterized by the enclosure compound type of layout that is typical of the Chimu Period of the city, but they certainly suggest that it is a reasonable possibility. North of the Moche Valley there are other sites similar to Chanchan in architectural style and layout. Schaedel (n. d.) has named these towns or cities as "urban elite centers." Like Chanchan, they consist of a series of extensive walled rectangular compounds, terraced buildings with complicated internal subdivisions, and incorporated pyramids. Pacatnamu (La Barranca) and Farfan in the Jequetepeque (Pacasmayo) Valley and El Purgatorio in the Leche Valley are the outstanding examples and the only sites of this type that compare with Chanchan in size. These sites have, generally, been accepted as being contemporaneous with Chimu, although the ceramic dating on none of them is satisfactory.

It is, of course, a possibility that the urban-type site did not become established in the far northern coastal valleys until Chimu or Late times although it was introduced to Virú and Moche on the Tiahuanacoid level. Such a lag in the settlement types of the northern valleys might very well be correlated with the failure of the Tiahuanaco invasion to push this far north.

In discussing the urban elite type of site at Chanchan and in the valleys to the north of Moche, it may have been implied that sites of this type were established in the Virú Valley in the Tomaval Period. Actually, this is not quite the case, although there is a definite relationship between certain Tomaval sites and the urban elite centers. As defined by Schaedel, the urban elite center is an imposing dwelling-palace-temple complex laid out within a series of rectangular enclosures. He also defines a related site type, the urban lay center, which, though having the enclosure features and the rectangular, planned aspect of many of its units, does not include the elaborate decorated rooms, terraces, or mounds. This lay center type of site, on a relatively small scale, characterizes the Tomaval Period in Virú. In the body of the report I have named them, "Rectangular Enclosure Compounds," "Great Rectangular Enclosure Compounds," and "Rambling Enclosure Compounds" (see pp. 350 ff. for summary discussion). Some of these sites have a few of what might be called "elite" features; but compared to Chanchan or Pacatnamu they are tiny and humble. Nor do large urban elite centers come into being in the succeeding La Plata or Estero Periods in Virú. It is as though Virú, in these later periods, remains a rural and unimportant province, subsidiary to the larger valleys to the north and but a small reflection of them.

The urban-type community and the rectangular enclosure compound unit occur south of Virú, but the dating of these sites and regions is not sufficiently refined to enable us to distinguish between Tiahuanacoid and later periods. In the Supe Valley, the Chimu Capac enclosure has several large square platforms of different levels arranged around three sides of a deep, square court (Uhle, 1925, pp. 257 ff.). This description sounds like an urban elite center. The pottery from the site, as classified by Kroeber (1925 b), is both on the Tiahuanacoid and Chimu levels. In the Rimac and Lurin Valleys the big urban sites of Cajamarquilla and Pachacamac are comparable to north coast urban elite centers.[66] In both cases, it is definite that the urban complexes were occupied and used in the Late or sub-Chancay Period (corresponding to the Chimu Period); but there is also a good possibility that "urbanization" began on the preceding Tiahuanacoid horizon. Farther south, in the Cañete Valley, a similar situation obtains. Kroeber's (1937, pp. 229 ff.) "Middle Canete" culture appears to be nonurbanized, but "Middle Canete" is without Tiahuanacoid influence and may be an Early or Classic Stage culture. In the same valley, the Cerro Azul site (Kroeber, 1937, pp. 244 ff.) has definite architectural parallels with north coast urban elite centers. Its ceramics are similar to those of the Late Chincha Period and its most likely date is on the post-Tiahuanaco horizon, but again we cannot be sure. In the Chincha Valley, the sites of Tambo de Mora, La Cumbe, and La Centinela (Uhle, 1924 a, pp. 60–70) all have some significant similarity to the urban elite center. These sites, too, are generally conceded to be Late or post-Tiahuanacoid, but incontrovertible testimony of this is lacking.

Throughout most of the highlands there is little or no evidence for the enclosure compound or the urban center on the Tiahuanaco horizon. The Wilkawain-Tiahuanaco Period, which Bennett (1944, pp. 14–17 and 53) formulated for the Callejon de Huaylas, has scattered house sites of small stone buildings (one to four rooms) and multistoried temples with interior galleries and chambers. In brief, the pattern is much like that of the Classic Stage Recuay culture. The Middle Huamachuco Periods (McCown, 1945, pp. 341–342), which although not Tiahuanaco-influenced are probably so equatable in time, present compact, agglutinated villages of stone-walled rooms sometimes arranged around large courts. Their plans (McCown, 1945, figs. 8–12), though to some extent regular, are not like those of the coastal compounds. Moreover, in a subsequent Late Huamachuco Period, thought to be contemporaneous with Chimu, the settlements are extremely scattered and irregular. It is not until the Inca invasion of the region, and the construction of Viracochapampa, that the planned rectangular enclosure site layout was adopted (McCown, 1945, pp. 342–343). In the south highlands, nothing has been described for the Decadent Tiahuanaco Period (corresponding to the Tiahuanacoid horizon) that suggests the rectangular, planned community.

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[66] Means (1931, pp. 526–527) also describes a site known as the "House of the Chief," about one mile north of Maranga. Its architecture, tapia adobe walls, and arabesque wall decorations are similar to the urban elite centers farther north.

The one possible pre-Inca exception in the highlands, a site with great walled enclosures suggesting those of the coast, is Huari in the central sierra. As is well-known, this site assumes a special importance in Andean archeology as it might be the center and font of the Tiahuanaco horizon or wave of influence that sweeps both coast and highlands. Can the idea of the planned, enclosed site be derived from Huari? This seems like asking too much, and I am suspicious of such neat, single-source origins. It is, of course, a possibility. As yet, however, we do not know if the big stone-walled Huari quadrangles, the "La Capilla" sector of the site, equate with the Huari Tiahuanacoid style (see Rowe, Collier, and Willey, 1950, p. 122 ff.) pottery found on the surface. It may be that "La Capilla" is much later. This remains to be determined.[67] Until it is, the place of Huari in the development of Peruvian settlement and architectural plans remains something of a puzzle.

In closing this survey of the settlement and architectural types of the Tiahuanaco horizon and their comparisons to the Tiahuanacoid Tomaval Period of the Virú Valley, a word more should be said about Pyramid Mounds. In Virú, there is evidence that they declined in importance during the Tomaval Period, although if our ceramic datings and associations are trustworthy some mounds were built and a good many more of earlier construction were re-used. This custom of the re-use of an earlier mound is found in the Tiahuancoid periods in other valleys. The classic example is the Huaca del Sol at Moche where Uhle found Coast Tiahuanaco, Epigonal, Black-white-red, and pressed ware graves on the platforms below the pyramid summit (Kroeber, 1925 a, pp. 194 ff.). Schaedel (personal communication, 1951) is of the opinion that the Huaca del Sol, and other mounds generally attributed to the Mochica, were significantly rebuilt and added to in the Tiahuanaco era. It is possible that some of the Virú mounds were rebuilt as well as re-used, although I have no definite proof of this. Another Tomaval feature noted in Virú is that of constructing a mound or platform within an enclosure compound. Such mounds in Virú are quite small, but they are found within small sites. There may be an analogy between these little enclosed mounds and platforms and the much larger mounds associated with the enclosures of the urban elite centers such as Chanchan.

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[67] Wendell C. Bennett's recent (1950) excavations at Huari may throw some light on this particular problem.

In discussing the probable relationships of the Tomaval Period to other regions of Perú and to the Tiahuanaco-influenced horizon it has been impossible to exclude the subsequent Chimu horizon of the north and central coasts. In the Virú Valley the Chimu horizon is represented by the La Plata Period. The La Plata settlements are very much the same as those of the Tomaval Period. Enclosure compound sites are much like those of the earlier period except that no more Great Rectangular Enclosures are constructed, and, in general, there seems to have been less building than in the Tomaval Period. This decrease is not consistent with what we know of other north coast valleys during the Chimu Period, for it was at this time that the great urban elite and urban lay centers were brought to their height.

As stated previously, the enclosure compound sites of Virú, for both the Tomaval and La Plata Periods, are miniatures of some of the contemporaneous constructions in the larger valleys. Chanchan, the Chimu capital, although in a giant class, shows a number of specific similarities to the Virú sites. The rectangular enclosure plan, the relatively high and massive enclosure walls, the carefully and symmetrically arranged interior subdivisions of large courts, corridors, and rows of small rooms, and the use of massive tapia adobe sections in conjunction with small rectangular adobes are some of the most outstanding traits held in common. There is also the above-mentioned concept of incorporating a mound or raised solid platform within the community which occurs, on a small scale, in the Tomaval and La Plata Period compounds. Nor can site location and topography be overlooked. Both Chanchan and the Virú late period compounds are situated on the flats of the lower Valley near the sea. *Pukios* or *fosos* are found at both (pl. 57, *top*), and the patterns of cultivation plots near the dwellings are very similar. A garden of the Velarde Group, at Chanchan (Horkheimer, 1944, fig. 52), has the undulant, S-shaped type of plot like those found near site V–106 in Virú (see also pl. 57, *center*). There are minor details as well. For example, site V–269 in Virú (La Plata Period) has adobe relief wall decorations on doorway columns that are in the Chimu style. In sum, the Virú-Chanchan relationship in settlement type is, in many ways, as close as it is in ceramics. The striking difference is rather one of quantity and elaboration, with Virú definitely in the role of a rural, provincial dependent.

The metropolitan character of Chanchan has been described by various authors (among them Squier, 1877; Holstein, 1927; Kroeber, 1926 a, 1930), and it is this quality which sets it completely apart from Virú. Horkheimer (1944, pp. 60 ff.) and Schaedel (n. d.) have pointed out some of the sociological implications of the site. The main "groups" or "palaces" are rectangles averaging 400 by 200 meters in extent enclosed by high (as much as 12 meters), tapered walls of mud, gravel, tapia, and brick adobes. As Horkheimer emphasizes, there are no parapets or means of access to the tops of these walls; hence, they were not primarily defensive works. He agrees with Squier that the enclosures were probably *barrios* or precincts for social groups specializing in various industries. The walls were means of social control, serving to impede easy movement from one unit to another. As far as I am aware there is no evidence yet adduced to verify the postulation concerning specialized craft groups; nevertheless, the great enclosure walls and the cell-like arrangements of rooms (see Horkheimer, 1944, p. 67, for plan of "Uhle Group") within enclosures certainly justify the supposition that Chanchan society was rigidly and restrictively controlled. Within and adjacent to the rectangular enclosures are large rooms with ornamented walls, courtyards, and mounds. These, presumably, were the palaces and quarters of the ruling class. The rich tombs within the site, filled not only with pottery but with gorgeous feather mantles, jewelry, carved wood, and gold are further evidence of the wealth and rank of certain individuals.

Outside of the great enclosures, particularly to the northwest of the central area, there is a vast plain of formerly irrigated land with small walled compounds scattered here and there. These are the enclosure compound units most comparable to what we find in Virú. Apparently, the people living in these buildings were the agriculturists and fishermen who produced the foodstuffs for the city rulers and their retainers.

There is another parallel in settlement patterning and valley utilization between the Moche Valley and Virú. In the northern valley, Schaedel (n. d.) has described a site called Galindo which occupies the neck of the valley far above the broad plains on which Chanchan is situated. Galindo is a large urban lay center, as this is defined by Schaedel. The site stretches along for some 8 kilometers. There are numerous stone foundations of houses or house groups which fill several quebradas and ascend the adjoining hillsides. There are also several Rectangular Compounds, although none of these is as large or as elaborate as those of Chanchan. The two principal irrigation canals that feed the fields near Chanchan flow through the Galindo site. It is Schaedel's belief, and I would agree, that the valley authorities in Chimu times maintained a large community in this region to service the canals and to serve as a buffer against attack coming down from the upper valley passes. Now Schaedel's description of Galindo could be applied to the Tomaval and La Plata Period occupation of the

Huacapongo branch of Virú, the branch through which the main water supply for the lower part of the Valley flowed and along which the principal canals were constructed. In my treatment of Virú, I described the numerous house groups of the Huacapongo as individual sites; but a more inclusive view might be taken, and the semicontinuous architectural remains stretching along both sides of the Valley for several kilometers could be considered as a type of urban concentration. Particularly, the cluster of sites on the floor of the Upper Huacapongo seem to fit the Galindo pattern. Here there are a number of agglutinated groups and several Rectangular Compounds all seemingly gathered together behind a defense wall which shuts off the Valley above this point. A large population in this strategic position could have fulfilled the functions outlined by Schaedel for Galindo.

In our treatment of the Tomaval Period and the Tiahuanaco horizon, the urban centers of the valleys north of Moche were listed. Besides Pacatnamu, Farfan, and El Purgatorio, there are Chicamita and Chiquitoy Viejo (Chicama), Cerro Corbacho (Saña), Apurle (Motupe), and Patapo, Saltur, and Sipan (all in the Lambayeque Valley). Schaedel (n. d.) classes Apurle as an elite or palace group and the others as large lay centers comparable to Galindo. To the north of Lambayeque the urban pattern is not reported in spite of the fact that Chimu is a strong influence in the ceramics of the Pariñas-Chira region. Instead, the big sites in these valleys are more like the ceremonial mound centers of Mochica or even earlier times farther south. Lothrop (1948, pp. 59–60) describes a large huaca on the Hacienda Sojo, La Chira Valley. This mound was 20 feet high and constructed of conical adobes. The associated pottery, however, is paddle-marked, and some Chimu blackware was found. In Lothrop's opinion (Lothrop, 1948, p. 65), La Chira was inhabited just before the Spanish conquest by people who lived in small communities and constructed adobe pyramids. If he is correct, it means that the old Classic, or perhaps Formative, Stage settlement pattern of the lower north coast persisted until the sixteenth century in the far north.

As has been described, the coastal valleys south of Virú developed urban, planned centers in the later periods of their prehistory. Whether these were begun in Coast Tiahuanaco or Chimu-Late Chancay-Late Chincha times is debatable. Tello (1943, pp. 138 ff.) and Schaedel (n. d.) describe sites of this type in Nepeña and Casma. The latter, in discussing Manchal, in Casma, says that it is a small planned unit with massive tapia adobe walls. This sounds much like the Tomaval-La Plata sites of Virú. Schaedel makes the further observation, as had Kroeber before him, that tapia is more characteristic of the Middle and Late Periods of the central coast than it is of the north coast. I have not surveyed widely enough along the Peruvian coast to verify or question this generalization. In Virú, tapia is more commonly used in Middle and Late times (Tomaval, La Plata, Estero) than the small adobes; however, both are frequently employed together. If Schaedel is right in his assumption, this south to north movement of the thick tapia wall trait may be additional evidence for the similar sweep of the Coast Tiahuanaco influence or conquest.

In Virú, and elsewhere on the north coast, there is little in the way of architecture or settlement patterning that can be attributed to Inca influence, per se. It is true that in many localities of Perú the Inca constructed planned, rectangular towns, and we know that such community layouts had a certain prestige value as an aspect of "civilization." It is certain, however, that the planned town was older in Virú and the other north and central coastal valleys than the domain of the Inca. For the Estero Period, then, there is little by way of comparative study that would not pertain to La Plata or even Tomaval.

To conclude, we have seen that the ancient Viruñeros started off their simple horticultural and fishing society of the Cerro Prieto Period as the equals of their closely related Chicama neighbors. During this Guañape Period maize and a number of new technological ideas were diffused throughout much of Perú. Along with these ideas came a conceptual system, probably religious, which we see reflected in Chavín-style art. In response to this system, special buildings were erected in some of the coastal valleys. Those in Virú were very simple, but the buildings, or temples, in other valleys, such as Chicama, Nepeña, and Casma, were much more elaborate. Perhaps even at this time Virú was beginning to lag behind her larger and more populous neighbors. In the succeeding period, which we have called the Puerto Moorin, there was a sudden population increase in Virú and also a population shift to the upper sections of the Valley. These changes were probably the result of increased agricultural production and of the beginnings of canal irrigation in the upper quebradas. People lived in small clusters of scattered houses or in small-house agglutinations. Flat-topped Pyramid Mounds were constructed, and Hilltop Redoubts were built for defense and safety. In other regions of Perú, most of these same trends are noted. It is quite likely that Pyramid Mounds were known earlier in some of the other valleys, although we cannot place them earlier than the Puerto Moorin Period in Virú. Both in coast and highland, the communities of the time level of Puerto Moorin were largely of the same small-settlement types.

The Gallinazo Period, following Puerto Moorin, was the golden age of the Virú Valley. It coincides with the Late Formative and Early Classic Stages of Peruvian culture history, and the developments of Virú were closely paralleled in the neighboring north coast valleys. This was the era of the tremendous adobe pyramids, of impressive fortified strongholds, and of the first palace clusters. Dwelling communities were larger than before. Rooms were built in large, irregular clusters, sometimes near the pyramids, sometimes remote from them. Canals led from the uppermost reaches of the Valley down to the coast, and all available land was watered and cultivated. To the detriment of the Viruñeros of Gallinazo times, these developments at home were not only paralleled in the other valleys but they were exceeded. To the north, there is evidence that a powerful state was forming in the Chicama and Moche Valleys, two of the most important river and cultivation systems of the coast. This was the Mochica state whose warlike activities and governmental customs have been preserved for us in their modeled and painted pottery. Apparently for some years, or centuries, Virú had been influenced by, or had exchanged influences with, the Mochica. This infiltrative interchange was suddenly climaxed by the establishment of Mochica-style culture in Virú. This marked the beginning of the Huancaco Period during which time the settlement patternings of Virú changed but slightly. Virú was a province of the Mochica domain, but her conquerors were possessed of a similar culture.

The Mochica dominance over Virú was broken after what appears to be only a short period. The new influence is the Coast Tiahuanaco. Unlike the Mochica invasion, this new influx effects drastic settlement-pattern changes. The pyramid cult becomes less important, and there is a great emphasis upon planned dwellings arranged in rectangular, walled compounds. The influence of Coast Tiahuanaco, or the Tiahuanaco horizon, is known throughout most of Perú. There are some indications that in other valleys of coast and highland the new settlement type was coincident with the Tiahuanaco stylistic (and probably military) invasion.

It is certain that by the next period, which is the La Plata in Virú, the urban-type settlement was well established throughout much of the Peruvian area. Great walled sites, enclosing or incorporating palace quarters, terraces, corridors, courtyards, and numerous small rooms are found all the way from the Lambayeque Valley on the north to the Chincha Valley on the south coast. The Viruñeros never constructed a town or city comparable to Chanchan, El Purgatorio, or Cajamarquilla. Apparently the Valley was too small or too unimportant for this. Their compound sites were, however, similar to the larger urban concentrations in many architectural details. As at Chanchan, the Virú compound sites of the later periods were near the shore while the other population concentration of the Valley was in the upper quebradas. There may have been several reasons for this deployment of inhabitants. I have suggested that the Virú irrigation systems may have broken down in the La Plata Period and that some populations moved near the shore to depend upon *pukio* cultivation while others sought the upper quebradas to be nearer the sources of river and canal outlets. Although this may have happened in Virú, it seems unlikely that such could have been the case in the Moche Valley with its great irrigated areas around Chanchan. Schaedel has suggested that the population and settlement division there may correspond to rulers, artisans, and agriculturists grouped around Chanchan with soldiers and canal workers settled in the strategic upper passes of the valley.

During the La Plata Period Virú declined in population. We know that the Valley was a dependency of the Chimu kingdom or empire which replaced the Coast Tiahuanaco domain. Perhaps many inhabitants were removed from the Valley and resettled elsewhere. It is also possible that there was a general population decline along the entire north coast. Rowe (1948, pp. 45, 53), commenting upon the Inca victory over the Chimu, surmises:

> . . . perhaps whatever weakness was responsible for the near depopulation of the coast in early Colonial times was already making itself felt.

Cieza de León, traveling along the north coast in 1548, less than 20 years after Pizarro's victory over the Inca, describes valley after valley as scantily populated but with many signs of dense populations in ancient times. The decline which he noted may be wholly the result of the Spanish conquest and subsequent policy; or it may have been only the end result of a trend set in motion during the Chimu Period.

There seems to have been a fatal flaw somewhere in Peruvian coastal culture. The north coast, particularly, with its big, rich valleys was for a long time an optimum environment for the development of civilization. With irrigation and intensive cultivation large, dense populations probably were attained here before they were achieved in the highlands. Yet the great valley irrigation systems were highly specialized means of sustaining life, and because of this specialization they were vulnerable to attack and disruption. With the urban-type life of the later periods, the dense population centers imprisoned in narrow valley oases would have appeared as over-ripe plums to the more mobile highlanders. To protect an urban center by drawing allies or subject peoples from other valleys would only have compounded the disaster by throwing a greater burden on the food resources of the metropolis. Virú may have been depleted of population in the La Plata Period in order to sustain and defend Chanchan, at once the glorious apex and tragic "white elephant" of Chimu civilization.

APPENDIX

INDEX OF ARCHEOLOGICAL SITES IN THE VIRÚ VALLEY

The Index of Sites is the master list for the 315 archeological sites that were recorded by the Virú Valley Expedition of the Institute of Andean Research in 1946. It is accompanied by a map of the Virú Valley showing the locations of all of these sites by corresponding number (fig. 2). It should be noted that certain of these sites have been or will be reported upon in detail by other participating members[63] of the Virú Valley program. In these reports the same site numbering series will be used as that given in this Index.

The Index is arranged in numerical order from V–1 through V–315. This numerical order has no regional or archeological significance. Sites were numbered as they were located and visited. In cases where it is known, the site name, or names, are given.

Each site is briefly described under the entry, *Type of Site.* This is done merely with an identifying phrase or word, such as: "cemetery," "irregular agglutinated house group," "midden area," or "adobe pyramid mound."

Location is based upon a coordinate system keyed to the Valley site map. The map has been laid out with a grid consisting of intervals of 2 minutes of latitude and 3 minutes of longitude. The longitudinal divisions are labeled, from west to east, as A, B, C, D, E, F, and G. The latitudinal divisions are numbered, from north to south, as 1, 2, 3, 4, 5, and 6. Quadrangle locations are then designed as, for examples, "A–2" or "B–4." Within individual quadrangles reference is made to further subdivision by quarters so that a final location designation will read "Quad B–3, southeast," meaning, in this case, that the site in question is located somewhere in the southeast one-quarter of the B–3 coordinated quadrangle.

Period refers to the culture period as it has been established in the Virú Valley archeological sequence. If a site shows evidence of occupation at more than one period, the names of two or more periods are listed. For many sites with more than one period component there is also a statement which relates a particular structure or site feature to a specified period. An example of this would be a site, showing Gallinazo, Huancaco, and Tomaval ceramics, where it had been determined that some of the midden refuse dated from the Gallinazo Period, that an adobe structure had been built in Huancaco times, and that, still later, Tomaval Period graves were intrusive into the site. In those cases where a period has been subdivided into "Early," "Middle," and "Late" or "Early" and "Late" phases, the proper phase or subperiod is indicated for a site when this is known. Where no subperiod designation is given, it has not been determined.

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[63] W. C. Bennett (1950); D. Collier; W. D. Strong; C. Evans, Jr.; J. B. Bird; and J. A. Ford (1949).

Validity is a judgment on the reliability of the period placement or dating of any site or part of a site. Such validity ratings range from "excellent" to "poor." These ratings refer to surface or excavation collections of pottery from the sites in question and to the degree of success with which these collections have been classified. The majority of the period datings and validity ratings were made by Ford and bear the initial "/F." Those made by Willey are designated "/W"; those by Bennett, "/B"; those by Collier, "/C"; those by Strong and Evans, "/SE"; and those by Bird, "/Bird."

Special *Comment* is added to the statements on sites for which it seemed desirable to present information other than that called for under the regular headings. In all instances where a site has been mentioned in the archeological literature on Virú (specifically, Kroeber, 1930; Bennett, 1939; Larco Hoyle, 1938, 1944, 1945 b; Horkheimer, 1944) this circumstance has been noted under *Comment* or elsewhere.

V–1. *Name:* San Ildefonso. *Type of site:* Cemetery. *Location:* Quad D–2, southwest. *Period:* Huancaco. *Validity:* Excellent /F.

V–2. *Name.* None. *Type of site:* Cemetery. *Location:* Quad D–2, southwest. *Period:* Guañape (Middle). *Validity:* Excellent /F. *Comment:* A very few late period sherds (post-Gallinazo) were also found at this site. (See Larco Hoyle, 1944, p. 1.)

V–3. *Name:* None. *Type of site:* Cemetery. *Location:* Quad D–2, southwest. *Period:* Huancaco. *Validity:* Excellent /F.

V–4. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad D–2, southwest. *Period:* Tomaval. *Validity:* Average /F.

V–5. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad D–2, southwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–6. *Name:* None. *Type of site:* Cemetery. *Location:* Quad D–2, southwest. *Period:* Huancaco. *Validity:* Poor /F. *Comment:* A very few Puerto Moorin sherds also found at site.

V–7. *Name:* None. *Type of site:* Probably a Rectangular Enclosure Compound. *Location:* Quad D–2, southeast. *Period:* Tomaval. *Validity:* Excellent /F.

V–8. *Name:* Cerro San Ildefonso. *Type of site:* Irregular Agglutinated Village. *Location:* Quad D–2, southeast. *Period:* Tomaval. *Validity:* Average /F.

V–9. *Name:* None. *Type of site:* Irregular Agglutinated Village. *Location:* Quad D–2, southeast. *Period:* Tomaval. *Validity:* Excellent /F

V–10. *Name:* None. *Type of site:* Rectangular Enclosure Compound Village, rock walls. *Location:* Quad D–2, southeast. *Period:* Huancaco. *Validity:* Poor /F.

V–11. *Name:* San Francisco cemetery. *Type of site:* Cemetery and midden site of different periods. *Location:* Quad D–2, southeast. *Period:* Midden dates from Puerto Moorin (Early); cemetery from Huancaco. *Validity:* Midden, average; cemetery, excellent. *Comment:* Bennett (1939, p. 21 and p. 28) lists six cemeteries in the section between the Castillo de Tomaval and San Francisco Hacienda. This is undoubtedly one of them. Bennett's excavations and collecting revealed both Early Chimu (Huancaco Period) and Late Chimu (La Plata Period) grave ceramics.

V–12. *Name:* San Francisco cemetery. *Type of site:* Cemetery. *Location:* Quad D–2, southeast. *Period:* Huancaco. *Validity:* Poor /F. *Comment:* One of Bennett's (1939, pp. 21, 28) San Francisco cemeteries.

V–13. *Name:* San Francisco cemetery area. *Type of site:* Apparently a midden and cemetery site with some rock-walled dwellings although the latter are semiobliterated. Several periods represented. *Location:* Quad D–2, southeast. *Period:* Puerto Moorin, Gallinazo, Huancaco, and Tomaval are all represented, each by a few sherds. May have served as both a habitation site and cemetery for any or all of these periods. *Validity:* Uniformly poor /F. *Comment:* See Bennett (1939, pp. 21, 28).

V–14. *Name:* San Juan house site. *Type of site:* Regular Agglutinated Village unit. *Location:* Quad E–2, northwest. *Period:* Some refuse in area dates from Guañape (Late); structure probably dates from Huancaco. *Validity:* Earlier refuse, average; structure, poor /F. *Comment:* This site, along with sites V–39 to V–50 and V–52 to V–58, are listed by Bennett (1939, p. 21) as San Juan house sites.

V–15. *Name:* San Juan cemetery. *Type of site:* Cemetery. *Location:* Quad E–2, northwest. *Period:* Huancaco. *Validity:* Excellent /F. *Comment:* This cemetery, along with another, is mentioned by Bennett (1939, p. 21). He describes them as exhausted by looters.

V–16. *Name:* Castillo de San Juan (northwest). Also referred to as San Juan Fortress (Bennett, 1939, p. 21). *Type of site:* A Castillo Fortification Complex. *Location:* Quad E–2, northwest. *Period:* Dominantly Gallinazo (Late); Huancaco Period also represented. *Validity:* Gallinazo dating excellent; Huancaco dating poor /F. *Comment:* This site occupies the northwestern portion of the ridge. It probably formed a unit with V–62, a castillo structure situated on the southeastern extremity of the ridge. V–62 dates from the succeeding Huancaco Period.

V–17. *Name:* Queneto Temple. *Type of site:* Obviously a temple or Community Building. Constructed of large boulders. *Location:* Quad D–1, southeast. *Period:* Ford dates two surface collections from the temple and its environs. One is combined La Plata and Estero; the other is Estero. It seems unlikely that the structure was built in these late periods. Bennett (1939, pp. 22–27) found an unidentified crude orange ware, Late Chimu (La Plata), and Early Chimu (Huancaco) pottery at the site. Larco Hoyle (1938, pp. 13–19) believes the temple structures to have been built in a pottery-making but pre-Cupisnique era, corresponding to the crude orange ware. (See also Horkheimer, 1944, p. 78.) *Validity:* Ford rates the validity of his dating as excellent. There is little doubt but what Bennett's Early Chimu (Huancaco Period) finds are correctly dated. The date of the temple structure is questionable, but I am of the opinion that it is, at least, pre-Huancaco.

V–18. *Name:* Possibly one of the San Francisco cemeteries (see Bennett, 1939, pp. 21, 28). *Type of site:* Rectangular Enclosure Compound Village, buried house foundations, midden, some burials. *Location:* Quad E–2, southwest. *Period:* Puerto Moorin (Early and Late) and Gallinazo (Late). *Validity:* Two collections support this dating. Ford rates the Gallinazo as excellent and the Puerto Moorin as poor.

V–19. *Name:* El Corral. *Type of site:* Regular Agglutinated Village unit, rock-walled rooms. *Location:* Quad E–1, southeast. *Period:* Huancaco. *Validity:* Average /F.

V–20. *Name:* None. *Type of site:* Large rock rectangular Community Building. *Location:* Quad E–1, southeast. *Period:* Collection from this site ranges from Gallinazo through Huancaco and Tomaval. The most likely date for the structure is Huancaco. *Validity:* Ford rates the validity of this collection as very poor.

V–21. *Name:* None. *Type of site:* Both scattered and agglutinated clusters of small rock-walled houses. *Location:* Quad E–1, southeast. *Period:* Collections date from Puerto Moorin (Early) and Tomaval Periods. Puerto Moorin collection probably dates structures. *Validity:* Rated as excellent and average /F.

V–22. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–1, southeast. *Period:* Collection has two components. One dates from Puerto Moorin (Early); the other from Tomaval. Questionable as to which dates structure but it is probably Tomaval. *Validity:* Poor and average /F.

V–23. *Name:* None. *Type of site:* Rock-Walled Compound. *Location:* Quad E–1, southeast. *Period:* Two components. One dates from Puerto Moorin (Early); the other from Estero and Colonial times. The latter probably dates the structure. *Validity:* Poor and average /F.

V–24. *Name:* None. *Type of site:* Irregular Agglutinated unit and Semi-isolated Large House. *Location:* E–1, southeast. *Period:* Two components dating as Puerto Moorin (Early) and Tomaval. The Tomaval component probably dates structure. *Validity:* Both component collections, although large, are rated as poor /F.

V–25. *Name:* None. *Type of site:* Irregular Agglutinated Village. *Location:* Quad E–1, southeast. *Period:* Tomaval. *Validity:* Excellent /F.

V–26. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–1, southeast. *Period:* Two components dating, respectively, from Puerto Moorin (Early) and Tomaval. The Tomaval component probably dates the structures. *Validity:* Average and excellent /F.

V–27. *Name:* None. *Type of site:* Site consisting of Irregular Agglutinated unit, Rectangular Enclosure Compound, and Semi-isolated Large House. *Location:* Quad E–1, southeast. *Period:* Tomaval. *Validity:* Excellent /F.

V–28. *Name:* None. *Type of site:* Large rock rectangular Community Building. *Location:* Quad E–1, southeast. *Period:* Two components. A small Puerto Moorin (Early) collection probably is the result of an earlier occupation; a large Huancaco collection dates the structure. *Validity:* Average and excellent /F.

V–29. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–1, southeast. *Period:* Two components. A large Puerto Moorin (Early) collection may date the structure, but I am inclined to think that the smaller Tomaval collection probably does. *Validity:* Excellent and poor /F.

V–30. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad E–1, southeast. *Period:* Two components. A Puerto Moorin (Early) collection probably represents an earlier occupation while the

Huancaco collection dates the site. *Validity:* Both components average /F.

V–31. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad E–1, southeast. *Period:* Two components. A Puerto Moorin (Early) and a La Plata. La Plata probably dates the structures. *Validity:* Both component collections rated as average /F.

V–32. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad E–1, southeast. *Period:* Two components. A Puerto Moorin (Early) and a Huancaco (see Ford, 1949, fig. 4). The latter probably dates the structures. *Validity:* Both component collections rated as excellent /F.

V–33. *Name:* None. *Type of site:* Agglutinated Village of rock-walled houses on hillside terraces. *Location:* Quad E–1, southeast. *Period:* Two components. A Puerto Moorin (Early) and a Huancaco. Probabilities favor the Puerto Moorin component dating the structures although houses and rooms of both periods may be present in this site. *Validity:* Excellent and average /F.

V–34. *Name:* None. *Type of site:* Rock-walled Semi-isolated Large House. *Location:* Quad E–1, southeast. *Period:* Gallinazo (Late). *Validity:* Excellent/F.

V–35. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–1, southeast. *Period:* Tomaval. *Validity:* Excellent/F.

V–36. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–1, southeast. *Period:* Not dated. Probabilities favor a Tomaval dating/W. *Validity:* Estimate made by Willey on house form and architectural features. Fair.

V–37. *Name:* Huaca de la Guerra. *Type of site:* Pyramid Mound of earth and rock. *Location:* Quad F–2, northwest. *Period:* Two large collections from this mound are both of the Tomaval Period. There is little doubt that the mound was used in this period, and at least the outer construction levels must date from this time. *Validity:* Collections rated as excellent and average/F.

V–38. *Name:* Castillo de Huancaco. *Type of site:* The V–38 area of this site is a courtyard lying off to the south of the main buildings. This area was covered with sherds and superficial rubbish. Test pits attempted here revealed the refuse to be no more than 10 cms. deep. *Location:* Quad C–4, southeast. *Period:* A very large collection, both from the surface and the superficial pits, is virtually pure Gallinazo (Late). *Validity:* Excellent/F. *Comment:* (See V–88, V–89 for listing of Castillo de Huancaco proper).

V–39. *Name:* None. *Type of site:* Regular Agglutinated Village, rock walls. *Location:* Quad E–2, northwest. *Period:* Two components. The first gathered from rubbish immediately surrounding a rock-walled house, dates as Huancaco; the second, taken from shallow fill in the excavation of one of the rooms, dates as Gallinazo (Late). Quite probably the house was occupied during both periods. *Validity:* Both component collections rated as average/F.

V–40. *Name:* None. *Type of site:* Rock-walled Semi-isolated Large House. *Location:* Quad E–2, northwest. *Period:* Gallinazo (Late). *Validity:* Average/F.

V–41. *Name:* None. *Type of site:* Semi-isolated Large House and Irregular Agglutinated Village unit. *Location:* Quad E–2, northwest. *Period:* Huancaco. There were also one or two sherds, out of 265, which belong to the Guañape (Late) Period. There is little doubt, however, that the structure is Huancaco. *Validity:* Excellent/F.

V–42. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–2, northwest. *Period:* Huancaco. There were one or two sherds out of a total of 138 which belong to the Guañape (Late) Period. *Validity:* Average/F.

V–43. *Name:* None. *Type of site:* Rock-walled Semi-isolated Large House. *Location:* Quad E–2, northwest. *Period:* Gallinazo (Late). *Validity:* Excellent/F.

V–44. *Name:* None. *Type of site:* Community Building. *Location:* Quad E–2, northwest. *Period:* La Plata. *Validity:* Average/F.

V–45. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–2, northwest. *Period:* Tomaval. Validity: Excellent/F.

V–46. *Name:* None. *Type of site:* Irregular Agglutinated terrace group. *Location:* Quad E–2, northwest. *Period:* La Plata. Two large surface collections and four collections, taken by arbitrary levels, from one of the rooms of the group all are of the La Plata Period. *Validity:* These collections are rated as average to poor/F.

V–47. *Name:* None. *Type of site:* Irregular Agglutinated Village unit compound. *Location:* Quad E–2, northwest. *Period:* La Plata. *Validity:* Poor/F.

V–48. *Name:* None. *Type of site:* Semi-isolated Large House cluster. *Location:* Quad E–2, northwest. *Period:* Not dated. No collection made.

V–49. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–2, northwest. *Period:* Tomaval. A few Puerto Moorin sherds in collection. *Validity:* Average/F.

V–50. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–2, northwest. *Period:* Date of collection ranged from Huancaco to Tomaval. Ford is of the opinion that the Tomaval date places the structures. *Validity:* Poor/F.

V–51. *Name:* Castillo de Tomaval. The site, as defined under the number V–51 in this survey, also includes the immediately adjacent Cemeterio de Tomaval, some rock-walled house sites and deep rubbish in a village area, and a large rock quadrangle. *Type of site:* A Castillo Fortification Complex. Agglutinated Village area, cemetery, and large rock rectangle in association. *Location:* Quad E–2, southwest. *Period:* Deep rubbish at the site ranges from Puerto Moorin (Late) through Gallinazo (Early, Middle, and Late). The Castillo was probably built or begun in the Gallinazo Period. There is evidence that it was also occupied and possibly added to in the Huancaco Period. House construction in the dwelling area dates as Gallinazo and Huancaco. The rock rectangle seems to have been built in the Huancaco Period. The cemetery yielded Huancaco and Tomaval burials. *Validity:* Excellent in general. Rubbish cuts and work in Castillo proper, rock quadrangle, and cemetery done by Strong and Evans. *Comment:* This is one of the best known sites of the north coast as well as one of the most imposing in appearance. (See Kroeber, 1930, pp. 77–78; Bennett, 1939, p. 21; Larco Hoyle, 1945 b, p. 3, and 1938, map opposite p. 62; Horkheimer, 1944, pp. 78–79.)

V–52. *Name:* None. *Type of site:* Irregular Agglutinated terrace group. *Location:* Quad D–2, northeast. *Period:* La Plata. *Validity:* Average /F.

V–53. *Name:* None. *Type of site:* Irregular Aggutinated Village unit. *Location:* Quad E–2, northwest. *Period:* Huancaco. *Validity:* Excellent /F.

V–54. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad E–2, northwest. *Period:* Tomaval. *Validity:* Average /F.

V–55. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad E–2, northwest. *Period:* Not dated. No collection.

V–56. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–2, northwest. *Period:* Not dated. No collection.

V–57. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–2, northwest. *Period:* Not dated. No collection.

V–58. *Name:* None. *Type of site:* Irregular Agglutinated terrace group. *Location:* Quad E–2, northwest. *Period:* Not dated. No collection.

V–59. *Name:* Huaca Gallinazo. *Type of site:* Pyramid-Dwelling-Construction Complex. Adobe structures. *Location:* Quad B–4, northwest. *Period:* Primarily belongs to the Gallinazo Period (all phases). Earlier levels probably Puerto Moorin (Late). Upper levels include evidences of Huancaco occupation of site. *Validity:* Excellent. Based upon 1946 excavations of Strong and Evans and the 1936 excavations made by Bennett (1939) as well as 1946 excavations by Bennett (1950). *Comment:* Kroeber (1930, p. 77) and Bennett (1939, pp. 54 ff.) have discussed Gallinazo. Bennett listed this site in his survey as "Ca–2." Also listed by Larco Hoyle (1938–39, vol. 1, p. 62 and 1945 b. p. 3).

V–60. *Name:* None. *Type of site:* Irregular Agglutinated Village. *Location:* Quad D–2, northeast. *Period:* Tomaval. *Validity:* Ford excavated a test pit in a refuse pile near houses. All levels of pit were Tomaval. Excellent rating.

V–61. *Name:* None. *Type of site:* Hilltop Agglutinated Village. *Location:* Quad D–2, northeast. *Period:* Tomaval, La Plata, and Estero are all represented. *Validity:* Average. Ford made surface collection and refuse test pit for samples here.

V–62. *Name:* Castillo de San Juan (southeast). *Type of site:* Castillo Fortification Complex situated on a high spur jutting out into the Valley. *Location:* Quad E–2, northwest. *Period:* Huancaco. Validity*:* Excellent /F.

V–63. *Name:* None. *Type of site:* Irregular Agglutinated rock-walled house clusters. *Location:* Quad E–1, southeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–64. *Name:* None. *Type of site:* Combined extensive midden area and cemetery. *Location:* Quad E–3, southwest. *Period:* Three components. The earliest, which is a midden or village refuse component is Puerto Moorin (Late) (see Ford, 1949, fig. 5); the next is a burial collection from looted graves dating as Huancaco; the last is a midden component dating as Tomaval. *Validity:* Collections made from different areas in site, showing some shifting of occupation or use. Rated as average, average, and excellent /F.

V–65. *Name:* None. *Type of site:* Midden or refuse area. *Location:* Quad E–3, northwest. *Period:* Tomaval. *Validity:* Average /F.

V–66. *Name:* Puerto Moorin site. *Type of site:* Midden and cemetery area. Also evidences of adobe house or building sites. *Location:* Quad B–3, northwest. *Period:* Two components. The earlier dates the midden and the adobe buildings as Puerto Moorin (Early) Period (see Ford, 1949, fig. 4). Part of the cemetery is also Puerto Moorin Period while part of it is Tomaval Period. *Validity:* Surface collection from midden and from cursory clearing of adobe house area by Ford and Willey.

Late Guañape and Puerto Moorin component rated as average. Excavation of graves (Puerto Moorin and Tomaval) by Strong and Evans rated as excellent. Strong and Evans also conducted additional excavations around the adobe structures. *Comment:* (See Larco Hoyle, 1944, p. 1).

V–67. *Name:* Santa Clara, Castillo de Santa Clara, or Castillo de Virú. *Type of site:* Castillo Fortification Complex atop a large natural hill in the center of the Valley. *Location:* Quad D–3, southeast. *Period:* Huancaco. *Validity:* Excellent /F. *Comment:* Kroeber (1930, p. 77) describes the site as Huaca Santa Clara; Bennett (1939, p. 21) also mentions it under the same name. Larco Hoyle (1938–39, vol. 1, p. 62) locates it on a site map under this name.

V–68. *Name:* Castillo de Napo is the present name. Bennett (1939, p. 21) mentions a site called La Gloria which answers the description. Larco Hoyle, however, refers to a site in this location as "Napu" (1938, p. 62). Possibly, La Gloria and Napo or Napu are the same. *Type of site:* Castillo Fortification Complex. *Location:* Quad E–2, southwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–69. *Name:* None. *Type of site:* Middens on sand hills. *Location:* Quad E–2, southwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–70. *Name:* None. *Type of site:* Small midden area and cemetery. *Location:* Quad E–2, northeast. *Period:* Two components. The earlier represents a Puerto Moorin (Early) occupation; the later is a Tomaval cemetery. *Validity:* Poor and excellent /F.

V–71. *Name:* Huaca Prieta de Guañape. *Type of site:* A deep midden situated on a natural low hill or dune. Evidences of clay-plastered and rectangular, hand-made adobe house walls. Rock foundations of a Community Building. Also cemetery area in association. *Location:* Quad A–3, southeast. *Period:* Multiple components. Earliest component is the Cerro Prieto Period which is represented by refuse levels and by houses with clay-plastered and adobe walls. The next component is the Guañape (Early and Middle) Period, represented by the upper refuse levels and by the Community Building foundation. The last component is the cemetery which is of the Tomaval and La Plata Periods. *Validity:* Excellent. Based upon excavations of Strong and Evans.

V–72. *Name:* Sarraque, Saraque, or Zaraque. *Type of site:* Hilltop Platform fortified site. *Location:* Quad E–2, northeast. *Period:* Puerto Moorin (Late). *Validity:* Average /F. A few scattered sherds of Huancaco, Tomaval, La Plata, and Estero were also found. *Comment:* This is the highest and the northwesternmost point of the Sarraque spur.

V–73. *Name:* Castillo de Sarraque. This is the site which Kroeber (1930, pp. 78–79) describes as being the "upstream one" of two sites on the Sarraque spur. Kroeber uses the spelling "Zaraque." Bennett (1939, p. 21) mentions Saraque as do Larco Hoyle (1938–39, vol. 1, p. 62, site 18) and Horkheimer (1944, p. 79). *Type of site:* Castillo Fortification Complex situated on a high strategic spur jutting out into the Valley. *Location:* Quad E–2 northeast. *Period:* Gallinazo (Late). *Validity:* Average /F.

V–74. *Name:* Also referred to as Sarraque. This may be the second site on the Sarraque spur to which Kroeber (1939 pp. 78–79) refers. It is likely that it is a part of the same fortification complex as V–73. *Type of site:* See V–73. *Location:* Quad E–2, northeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–75. *Name:* Palacio de Sarraque. At the foot of V–73 and V–74. Kroeber 1930, p. 78) mentions the site. *Type of site:* Probably a part of the Castillo Fortification Complex V–73–74. Large adobe platform or terraced structure. Extensions out from the main structure are terrace-platforms made by building retaining walls along foot of Sarraque spur. These walls made of stone and adobe. *Location:* Quad E–2, northeast. *Period:* There are two collections from this site. One dates as Gallinazo (Late); the other is Gallinazo (Middle and Late). *Validity:* Excellent and poor /F.

V–76. *Name:* Sarraque House Group. *Type of site:* Irregular Agglutinated rock-walled house clusters. *Location:* Quad E–2, northeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–77. *Name:* Huaca San Juan Number 1. (See Kroeber, 1930, p. 79, and Bennett, 1939, p. 21.) *Type of site:* Stone covered Pyramid-Dwelling-Construction Complex of earth, rock, and adobe. *Location:* Quad E–2, northwest. *Period:* The ceramic collection from this site is pure Gallinazo (Late). Because of certain structural features Willey is of the opinion that earlier Gallinazo and Puerto Moorin may be represented in part of the construction. *Validity:* Ford rates the surface collection as excellent. *Comment:* This may be Larco Hoyle's (1938–39, vol. 1, p. 62) site 16.

V–78. *Name:* None. *Type of site:* Group of Semi-isolated Large Houses. *Location:* Quad E–4, northwest. *Period:* Two components, Puerto Moorin (Early) and Tomaval. The latter probably dates the structures. *Validity:* Both excellent /F.

V–79. *Name:* None. *Type of site:* Rectangular Enclosure Compound. Rock walls and some adobe constructions inside. *Location:* Quad D–4, southeast. *Period:* Not dated. No collection.

V–80. *Name:* Bitín Fortress (mentioned by Bennett, 1939, p. 22). *Type of site:* Hilltop Redoubt. A rock-wall enclosure with dwelling and small Pyramid Mounds enclosed. *Location:* Quad D–4, southeast. *Period:* Puerto Moorin (Early). *Validity:* Ford rates this as excellent. He mentions the presence of a very few sherds of Huancaco and Tomaval Periods, probably from looted graves of these later periods.

V–81. *Name:* Palacio de Bitín. *Type of site:* Large adobe and rock-walled enclosure encircling a platform or small pyramid and cemetery. *Location:* Quad D–4, southeast. *Period:* La Plata. *Validity:* Poor /F.

V–82. *Name:* None. *Type of site:* Midden area. *Location:* Quad D–4, southeast. *Period:* Huancaco. *Validity:* Excellent /F.

V–83. *Name:* Compositan sites. One of a group. *Type of site:* Scattered Small-House Village of rock-walled houses. *Location:* Quad D–5, northwest. *Period:* Guañape (Late). *Validity:* Two collections, one of which rates excellent and the other poor /F.

V–84. *Name:* Compositan sites. One of a group. *Type of site:* Rock-walled constructions at base of natural knoll. Possibly a Community Building. *Location:* Quad D–5, northwest. *Period:* Guañape (Late). *Validity:* Excellent /F.

V–85. *Name:* Compositan sites. One of a group. *Type of site:* Scattered Small-House Village of rock-walled houses. *Location:* Quad D–5, northwest. *Period:* Guañape (Late). *Validity:* Excellent /F.

V–86. *Name:* Compositan sites. One of a group. *Type of site:* Scattered Small-House Village *Location:* Quad D–5, northwest. *Period:* Puerto Moorin (Late). *Validity:* Excellent/F.

V–87. *Name:* Compositan sites. One of a group. *Type of site:* Scattered Small-House Village. *Location:* Quad D–5, northwest. *Period:* Puerto Moorin (Early). *Validity:* Excellent /F.

V–88. *Name:* Castillo de Huancaco. Bennett (1939, pp. 22, 77–78) refers to this site as the "Castillo de Huancaquito," survey number "Ca–7." We were informed locally that this latter appellation is reserved for another ruin and that Huancaco is the more usual name for the site listed by us as V–88 and V–89. This should not be confused with Larco Hoyle's (1938–39, vol. 1, p. 62) "Huaca de Huancaco" which we have surveyed as V–239. *Type of site:* An adobe Pyramid-Dwelling-Construction Complex with some fortification features. Differs from the other "castillos" in being less obviously an impregnable defensive or military work. *Location:* Quad C–4, southeast. *Period:* V–88 is the designation given only to the southwestern half of the site proper. Two large collections of sherds from this part of the ruin date as Huancaco Period. *Validity:* Two collections rated, respectively, as average and excellent /F.

V–89. *Name:* Castillo de Huancaco. Designation V–89 applies to the northeastern part of the site proper. *Type of site.* (See V–88.) *Location:* Quad C–4, southeast. *Period:* Three sherd collections were made from this site. A large surface collection taken from a refuse dump about 30 meters east of the easternmost building dates as Gallinazo (Middle) Period. A second large surface collection from the easternmost building dates as Gallinazo (Late). A third collection from an excavated room within the site dates as Huancaco. *Validity:* These three collections all rate as excellent /F.

V–90. *Name:* Castillo de Huancaco. Great adobe-walled enclosure to west of site proper. *Type of site:* Midden in walled enclosure. Cemetery in area. *Location:* Quad C–4, southeast. *Period:* Surface inspection of sherds indicates Huancaco Period. *Validity:* Fair /W.

V–91. *Name:* Castillo de Huancaco. An adobe-walled area between V–88 and V–90. *Type of site:* Midden in walled enclosure or courtyard. *Location:* Quad C–4, southeast. *Period:* Surface inspection of sherds indicates Huancaco Period. *Validity:* Fair /W.

V–92. *Name:* Huancaco No. 2. *Type of site:* Small adobe-pyramid. *Location:* Quad C–4, southeast. *Period:* Huancaco. *Validity:* Poor /F. *Comment:* Small outlier to north of Huancaco proper.

V–93. *Name:* Castillo de Huancaco. Situated just a little to northwest of V–88. *Type of site:* Dwelling-Construction Mound. May be buried houses of adobe or adobe-lined tombs. *Location:* Quad C–4, southeast. *Period:* Huancaco. *Validity:* Average /F.

V–94. *Name:* None. *Type of site:* Cemetery. *Location:* Quad B–3, northeast. *Period:* Puerto Moorin (Late). Two later sherds found on surface. There are reports of Huancaco Period graves from the area. *Validity:* Ford rates above dating as poor.

V–95. *Name:* None. *Type of site:* Possible Pyramid Mound of earth or adobe. *Location:* Quad C–3, northwest. *Period:* Three components. The earliest is Puerto Moorin (Early); the others are Huancaco and Tomaval. Suggests additional building or re-use in later periods. *Validity:* All poor /F.

V–96. *Name:* The Carretera cemetery. *Type of site:* Cemetery. *Location:* Quad C–3, northwest. *Period:* Two components, Huancaco and Tomaval. *Validity:* Both poor /F.

V–97. *Name:* None. *Type of site:* Cemetery. *Location:* Quad C–3, northeast. *Period:* Huancaco. *Validity:* Excellent /F.

V–98. *Name:* Purpur cemetery. *Type of site:* Cemetery. *Location:* Quad B–3, northeast. *Period:* Huancaco. *Validity:* Excellent /F. *Comment:* Bennett (1939, pp. 22, 53) mentions several Early Chimu or Huancaco Period cemeteries along the Pampas of Purpur. This site is undoubtedly one of them. V–98 is certainly the best-known cemetery of the region and is the location of the deep graves which yielded the remarkable gold finds of several years ago.

V–99. *Name:* None. *Type of site:* Cemetery with adobe-lined graves. *Location:* Quad B–3, northeast. *Period:* Huancaco. *Validity:* Excellent /F. *Comment:* Probably one of the Early Chimu or Huancaco cemeteries listed by Bennett (1939, p. 22).

V–100. *Name:* None. *Type of site:* Small midden area. *Location:* Quad B–3, northwest. *Period:* Guañape (Middle). *Validity:* Excellent /F.

V–101. *Name:* None. *Type of site:* Midden area and cemetery. *Location:* Quad B–3, northwest. *Period:* Puerto Moorin (Early). A very few sherds of Huancaco Period types were also found. *Validity:* Excellent /F.

V–102. *Name:* Possibly one of the San Francisco cemeteries (see Bennett, 1939, pp. 21, 28). *Type of site:* Irregular Agglutinated Village unit. Also Semi-isolated Large House. Midden refuse and cemetery areas. *Location:* Quad E–2, southwest. *Period:* Two components. A large collection dating from the Huancaco Period probably pertains to structures, some of the refuse, and cemeteries. A smaller collection of Puerto Moorin (Early) Period probably pertains to other refuse at the site. *Validity:* Rated as excellent and average /F.

V–103. *Name:* Huaca San Juan, Number 2. (See Kroeber, 1930, p. 79 and Bennett, 1939, p. 21.) *Type of site:* Stone-covered Pyramid Mound of earth, rock, and adobe. *Location:* Quad E–2, northwest. *Period:* Two components. The earlier dates the mound as Puerto Moorin (Early); the later probably represents late re-use in Estero times. *Validity:* Average and poor /F. *Comment:* This may be Larco Hoyle's (1938–39, vol. 1, p. 62) site 17.

V–104. *Name:* Possibly one of the San Francisco cemeteries. (See Bennett, 1939, pp. 21, 28.) *Type of site:* Midden area and cemetery. *Location:* Quad D–2, southeast. *Period:* Two components. The earlier occupation is Puerto Moorin (Early); the later cemetery is Tomaval. *Validity:* Both excellent /F.

V–105. *Name:* None. *Type of site:* Very extensive midden area. *Location:* Quad B–3, northwest. *Period:* Puerto Moorin (Early). Out of nearly 700 sherds there were only four representative of later periods. *Validity:* Excellent /F.

V–106. *Name:* Huaca de La Plata (Bennett, 1939, pp. 22, 77). *Type of site:* The huaca, proper, is, apparently, a mound of earth, adobes, and sand. It may be partly natural or it may have a solid artificial core. There are stone and adobe constructions on the summit. Numerous graves have been opened on its flanks and it is clear that it functioned as a cemetery. *Location:* Quad B–5, northwest. *Period:* A small surface collection dates as Tomaval, La Plata, and Estero. It is likely that all of these periods are represented in the cemetery. The mound or its summit constructions may have been built at an earlier time.

Validity: All collections rated as poor /F. *Comment:* Bennett (1939) listed this site as "Ca–6." Larco Hoyle (1938–39, vol. 1, p. 62) refers to it as "Huaca de La Plata."

V–107. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–5, northwest. *Period:* La Plata. *Validity:* Excellent /F.

V–108. *Name:* La Plata Compound. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad B–5, northwest. *Period:* La Plata. *Validity:* Average /F.

V–109. *Name:* Sausalito Cemetery. *Type of site:* Cemetery. *Location:* Quad C–4, southeast. *Period:* Two components. The earlier is Gallinazo (Middle and Late); the later is Huancaco. Both represented by grave debris. *Validity:* Average /F.

V–110. *Name:* Rinconada sites. One of a group. *Type of site:* Possibly a Rectangular Enclosure Compound. *Location:* Quad D–5, northeast. *Period:* Two components. The earlier is Puerto Moorin (Early); the later is Huancaco. The Huancaco component probably dates the structure. *Validity:* Excellent and average /F.

V–111. *Name:* Rinconada sites. One of a group. *Type of site:* Semi-isolated Large House. *Location:* Quad E–5, northwest. *Period:* Tomaval. *Validity:* Average /F.

V–112. *Name:* Rinconada sites. One of a group. *Type of site:* Probably an Irregular Agglutinated unit. *Location:* Quad D–5, northeast. *Period:* Two components. The earlier, represented by a very small collection, is Puerto Moorin (Early); the later, represented by a large collection, is Estero. *Validity:* Poor and average /F.

V–113. *Name:* Rinconada sites. One of a group. *Type of site:* Semi-isolated Large Houses. *Location:* Quad D–5, northeast. *Period:* Huancaco. *Validity:* Poor /F.

V–114. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–5, northwest. *Period:* Gallinazo (Late). *Validity:* Average /F.

V–115. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–6, northwest. *Period:* No collection. No date.

V–116. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–6, northwest. *Period:* La Plata. *Validity:* Poor /F.

V–117. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–6, southeast. *Period:* Gallinazo (Late). *Validity:* Poor /F.

V–118. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–6, northwest. *Period:* La Plata. *Validity:* Average /F.

V–119. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–6, northwest. *Period:* Probable multiple occupation including Tomaval, La Plata, and Estero. *Validity:* No collection. Site observation of sherds by Willey.

V–120. *Name:* None. *Type of site:* Cemetery. *Location:* Quad B–6, northeast. *Period:* Multiple use with Tomaval, La Plata, and Estero represented. *Validity:* No collection. Observation of surface sherds by Willey.

V–121. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–5, southeast. *Period:* Gallinazo (Late). *Validity:* Average /F.

V–122. *Name:* None. *Type of site:* Cemetery. *Location:* Quad B–5, southeast. *Period:* Probably used during Tomaval, La Plata, and Estero Periods. *Validity:* No collection. Observation of surface sherds by Willey. Rated as fair.

V–123. *Name:* Estero Compound Number 1. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad B–5, northwest. *Period:* Tomaval and Estero. Structures probably date as Tomaval. *Validity:* Poor /F.

V–124. *Name:* Estero Compound Number 2. *Type of site:* Rambling Enclosure Compound. *Location:* Quad B–5, northwest. *Period:* Tomaval and Estero components. Structures probably date as Estero. *Validity:* Excellent /C.

V–125. *Name:* None. *Type of site:* Cemetery. *Location:* Quad B–5, northwest. *Period:* Tomaval. *Validity:* Poor /F.

V–126. *Name:* None. *Type of site:* Midden area with adobe-walled structures. *Location:* Quad C–4, southeast. *Period:* Two components. Site occupation and structures date as Puerto Moorin (Early); intrusive burials as Huancaco. *Validity:* Both component collections rate as excellent /F.

V–127. *Name:* None. *Type of site:* Rock-walled and adobe-walled structures and midden. Possibly a Community Building. *Location:* Quad C–4, southeast. *Period:* Guañape (Late). *Validity:* Excellent /F.

V–128. *Name:* None. *Type of site:* Extensive midden area. *Location:* Quad C–4, southeast. *Period:* Guañape (Late). (See Ford, 1949, fig. 5.) *Validity:* Excellent /F.

V–129. *Name:* El Cerrito or Huancaquito Cemetery. *Type of site:* Cemetery and midden. *Location:* Quad C–4, southwest. *Period:* Two components. The earlier, Puerto Moorin (Early), dates the occupation; the later, Huancaco and Tomaval, dates the graves. *Validity:* Average and excellent /F.

V–130. *Name:* El Cerrito is one of the names assigned by Bennett (1939, pp. 22, 78); Castillo del Inca (Ibid., p. 23) is another. Locally, the site is known as Huancaquito today. *Type of site:* Castillo Fortification and an adobe Rectangular Enclosure Compound. *Location:* Quad C–4, southwest. *Period:* Castillo dates as Huancaco; Compound probably Tomaval. *Validity:* Average /F. *Comment:* Bennett's map (1939, fig. 1) appears to be in error in locating this site ("Ca–9").

V–131. *Name:* Cerro Sausalito. *Type of site:* Adobe-walled houses of Agglutinated Pattern. *Location:* Quad C–4, southeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–132. *Name:* Cerro del Piño. *Type of site:* Hilltop Redoubt. A rock-walled enclosure with dwellings and small Pyramid Mounds. *Location:* Quad C–4, southwest. *Period:* Puerto Moorin (Early and Late) and Gallinazo (Early). *Validity:* Average /F. *Comment:* Bennett (1939, p. 78) mentions the site.

V–133. *Name:* Cerro del Piño. South Cemetery. *Type of site:* Midden and cemetery. *Location:* Quad C–5, northwest. *Period:* Two components. The earlier is Guañape (Late) and represents the midden occupation and some graves; the later is Huancaco. *Validity:* Average and excellent /F. *Comment:* Bennett (1939, p. 22) mentions four cemeteries in this neighborhood of which V–133 and V–135 must be two. His location of Cerro del Piño ("Ca–8"), with relation to El Cerrito ("Ca–9"), on map (fig. 1), is incorrect.

V–134. *Name:* Cerro del Piño Mound Group. *Type of site:* Group of earth and rock Pyramid Mounds. *Location:* Quad C–4, southwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–135. *Name:* Cerro del Piño, West Cemetery. *Type of site:* Cemetery. *Location:* Quad C–5, northwest. *Period:* Huancaco and Tomaval. *Validity:* Ford rates site as average for Huancaco dating; Willey adds a Tomaval component from observations on sherds at site.

V–136. *Name:* Cerro del Piño, Northwest Midden. *Type of site:* Midden area. *Location:* Quad C–4, southwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–137. *Name:* None. *Type of site:* Hilltop Platform fortified site. *Location:* Quad C–5, northeast. *Period:* Puerto Moorin (Late). *Validity:* Poor /F.

V–138. *Name:* None. *Type of site:* Hilltop fortification or walled and terraced platform. *Location:* Quad C–4, southeast. *Period:* Gallinazo (Late). *Validity:* Average /F.

V–139. *Name:* None. *Type of site:* Midden area and cemetery. *Location:* Quad C–6, northwest. *Period:* Huancaco. *Validity:* Excellent /F.

V–140. *Name:* None. *Type of site:* Earth and rock Pyramid Mound and Irregular Agglutinated Village unit. *Location:* Quad F–2, northwest. *Period:* La Plata. *Validity:* Average /F.

V–141. *Name:* None. *Type of site:* Pyramid Mound of earth, adobe, and rock. *Location:* Quad F–2, northwest. *Period:* Two components. The earlier, Puerto Moorin (Early) may date the mound; the later, Huancaco, may date part of mound or its re-use. *Validity:* Both components rated as excellent /F.

V–142. *Name:* None. *Type of site:* Cemetery. *Location:* Quad F–2, northwest. *Period:* Tomaval. *Validity:* Excellent /W. *Comment:* This cemetery site was excavated (Willey, 1947).

V–143. *Name:* None. *Type of site:* Possibly a Rectangular Enclosure Compound. *Location:* Quad E–1, southeast. *Period:* Three components. A Puerto Moorin (Early) component probably represents early living refuse in all structures. Huancaco and Tomaval components undoubtedly refer to the houses used in both periods. *Validity:* Excellent, average, and average.

V–144. *Name:* None. *Type of site:* Agglutinated Village of rock-walled house groups. *Location:* Quad E–1, southeast. *Period:* Three components. The earliest, Puerto Moorin (Early), probably dates most of the house foundations; the later two, Tomaval and La Plata, indicate re-use of general area for burials or occupation. *Validity:* Excellent, poor, poor /F.

V–145. *Name:* None. *Type of site:* Irregular Agglutinated terrace group and Semi-isolated Houses. *Location:* Quad E–1, southeast. *Period:* Two components. The earlier, Puerto Moorin (Early) Period, is probably from an old occupation of the area of the site; the later, La Plata Period, probably dates structures. *Validity:* Poor and average /F.

V–146. *Name:* None. *Type of site:* Agglutinated Village of rock-walled house groups. *Location:* Quad E–1, southeast. *Period:* Several components. The earliest, Puerto Moorin (Early) Period, probably dates structures (see Ford, 1949, fig. 4). The others, Huancaco, Tomaval, La Plata, Estero, and Colonial, probably represent later burials. *Validity:* Excellent for Puerto Moorin component; poor for all others /F.

V–147. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad F–2, northwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–148. *Name:* Huaca La Gallina. *Type of site:* Earth and rock Pyramid Mound. *Location:* Quad F–2, northwest. *Period:* Only Tomaval component represented in strength. A very few Puerto Moorin sherds were found, but these are not sufficient to establish dating. Mound undoubtedly used or, possibly, built during Tomaval Period. *Validity:* Poor /F.

V–149. *Name:* Huaca El Gallo. *Type of site:* Pyramid-Dwelling-Construction Complex. Earth and rock structures. *Location:* Quad F–2, northwest. *Period:* Two components, Gallinazo (Middle) and Huancaco. Mound may have been under construction during both periods. *Validity:* Both excellent /F.

V–150. *Name:* None. *Type of site:* Irregular Agglutinated Village. *Location:* Quad E–1, southeast. *Period:* Two components. The earlier, Puerto Moorin (Early), is probably midden refuse from an old occupation; the later, Huancaco, probably dates site. *Validity:* Both excellent /F.

V–151. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Middle or Late). *Validity:* Excellent /B.

V–152. *Name.* One of the Tres Huacas. *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Early, Middle, Late), Huancaco(?), and Tomaval re-use. *Validity:* Excellent /B. *Comment:* This is Bennett's (1939) site "Ca–10c."

V–153. *Name:* One of the Tres Huacas. *Type of site:* (See V–152.) *Location:* Quad B–4, northwest. *Period*: Gallinazo (Early, Middle, Late), Huancaco and Tomaval re-use. *Validity:* Average /B. *Comment:* Bennett's (1939) site "Ca–10d."

V–154. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Early and Middle); re-use during Tomaval. *Validity*: Excellent /B.

V–155. *Name:* One of the Tres Huacas. *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Middle and Late); Huancaco re-use. *Validity:* Excellent /B. *Comment:* Bennett (1939) numbered this site as "Ca–10b."

V–156. *Name:* Las Velas. *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Middle and Late). *Validity:* Excellent /B. *Comment:* Bennett (1939) numbered this site as "Ca–10a." Judging from location, this is not Larco Hoyle's (1938–39, vol. 1, p. 62) "Grupo de Las Velas."

V–157. *Name:* None. *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Middle, Late). *Validity:* Excellent /B.

V–158. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, northwest. *Period:* Gallinazo. *Validity:* Good /B.

V–159. *Name:* None. *Type of site:* Cemetery. *Location:* Quad B–4, northwest. *Period:* Tomaval. *Validity:* Good /B.

V–160. *Name:* None. *Type of site:* Midden or, possibly, a cemetery. *Location:* Quad B–4, northwest. *Period:* Gallinazo. *Validity:* Average /B.

V–161. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, northwest. *Period:* Gallinazo. *Validity:* Average /B.

V–162. *Name*: Huaca de la Cruz. Not to be confused with the site V–239, nearby, which is marked as "Huaca Cruz" on Hoja 37 of the air photo map of the Peruvian Servicio Aereofotográfico Nacional for 1942. Bennett (1939, pp. 21, 28–51) excavated at Huaca de la Cruz in 1936. *Type of site:* Dwelling-Construction Mound on a natural dune. *Location:* Quad D–3, southeast. *Period:* Gallinazo (Early, Middle, Late), Huancaco, Tomaval, and La Plata. The Tomaval and La Plata Periods are, apparently, represented by intrusive graves. *Validity:* Excellent/SE.

V–163. *Name:* None. *Type of site:* Dwelling-Construction Mounds. *Location:* Quad B–4, northwest. *Periods:* Gallinazo (Late). *Validity:* Excellent /B. *Comment:* This is one of two small mounds associated with Bennett's (1939, pp. 22 and 54 ff.) site "Ca–10c."

V–164. *Name:* None. *Type of site:* Earth-Refuse Mound with burials. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Middle). *Validity:* Excellent /B and W.

V–165. *Name:* None. *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad C–4, northeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–166. *Name:* Huaca Carranza. *Type of* site: Pyramid-Dwelling-Construction Complex. *Location:* Quad C–4, northeast. *Period:* Huancaco. *Validity:* Excellent/F.

V–167. *Name:* None. *Type of site:* Two small adobe Pyramid Mounds. *Location:* Quad C–4, northeast. *Period:* Gallinazo (Late), Huancaco, and Tomaval. *Validity:* Rated average by Ford but Collier's later excavations in Huancaco and Tomaval levels raise this to excellent.

V–168. *Name:* None. *Type of site:* Adobe Pyramid Mound. *Location:* Quad D–4, northwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–169. *Name:* None. *Type of site:* Small earth or, possibly, adobe Pyramid Mound. *Location:* Quads C–3, southeast, and D–3, southwest (on line). *Period:* Gallinazo (Early). *Validity:* Excellent /F.

V–170. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–3, southeast. *Period:* Two components. The earlier is Puerto Moorin (Early); the later is Huancaco. *Validity:* Both average /F.

V–171. *Name:* None. *Type of site:* Great Rectangular Enclosure Compounds. *Location:* Quad C–4, northeast. *Period:* All aboriginal ceramic periods of the Virú chronology are represented in refuse levels at this site (Guañape, Puerto Moorin, Gallinazo, Huancaco, Tomaval, La Plata, and Estero). The adobe structures probably were built during the Tomaval Period but were occupied in La Plata and Estero as well. *Validity:* Excellent /F and C. *Comment:* Bottom refuse levels at this site are without ceramics and may possibly be representative of the Cerro Prieto Period.

V–172. *Name:* None. *Type of site:* Great Rectangular Enclosure Compound. *Location:* Quad C–4, southwest. *Period:* Tomaval. *Validity:* Average /F.

V–173. *Name:* None. *Type of site:* Small midden area. *Location:* Quad C–4, southeast. *Period:* Tomaval. *Validity:* Excellent /F.

V–174. *Name:* None. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad C–4, northeast. *Period:* Tomaval. *Validity:* Average /F.

V–175. *Name:* None. *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad C–4, northeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–176. *Name:* None. *Type of site:* Agglutinated Village and Compound Village of rock-walled terrace houses. *Location:* Quad F–1, southwest. *Period:* Puerto Moorin (Early). *Validity:* Excellent /F.

V–177. *Name:* None. *Type of site:* Group of rock-walled Agglutinated terrace houses. *Location:* Quad F–1, southwest. *Period:* Puerto Moorin (Late). *Validity:* Excellent /F.

V–178. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–2, northeast. *Period:* Huancaco. *Validity:* Average /F.

V–179. *Name:* None. *Type of site:* Rambling Enclosure Compound. Rock-walled. *Location:* Quad F–2, northeast. *Period:* Estero. *Validity:* Excellent /F.

V–180. *Name:* None. *Type of site:* Irregular Agglutinated Village. *Location:* Quad F–1, southeast. *Period:* Two components. The earlier is Guañape (Late) and the later is Huancaco. Questionable as to which dates structures. *Validity:* Average and poor /F.

V–181. *Name:* None. *Type of site:* Irregular Agglutinated Village of rock and adobe-walled buildings. *Location:* Quad F–1, southeast. *Period:* Huancaco. *Validity:* Poor /F.

V–182. *Name:* None. *Type of site:* Pyramid Mound inside rock-walled rectangle. *Location:* Quad F–2, northeast. *Period:* Tomaval. *Validity:* Average /F.

V–183. *Name:* None. *Type of site:* Irregular Agglutinated unit. May have been a Compound at one time. *Location:* Quad F–1, southwest. *Period:* Two components. The earlier is Puerto Moorin (Early). The later, which probably dates the construction, is Tomaval. *Validity:* Both excellent /F.

V–184. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad F–1, southwest. *Period:* Two components. The earlier is Puerto Moorin (Early). The later, which probably dates the constructions, is Tomaval. *Validity:* Excellent and average /F.

V–185. *Name:* Huacapongo Mound. *Type of site:* Pyramid Mound of earth and rock. No adobes in evidence although they may have been used. *Location:* Quad F–2, northeast. *Period:* Two components. A surface collection shows Puerto Moorin (Early) and Tomaval. A small collection from rubble fill in one of the upper retaining walls is pure Puerto Moorin (Early). Suggests possible construction in Puerto Moorin with additions or re-use in Tomaval. *Validity:* All average /F.

V–186. *Name:* None. *Type of site:* Midden area and cemetery. *Location:* Quad F–2, southeast. *Period:* Two components. The earlier, Puerto Moorin (Early), dates refuse. The later, Huancaco, dates burials. *Validity:* Excellent /F.

V–187. *Name:* None. *Type of site:* Pyramid Mound of earth and rock. *Location:* Quad G–1, southwest. *Period:* Two components. The earlier, Puerto Moorin (Early), may date the mound construction or its earliest levels. The later, Huancaco, obviously dates burials intrusive into mound summit and may also date part of the mound construction. *Validity:* Both component collections rate as excellent /F.

V–188. *Name:* None. *Type of site:* Pyramid Mound of earth and rock. *Location:* Quad G–2, northwest. *Period:* Two components. The earlier, Puerto Moorin (Early), probably dates the earlier building levels of the mound. The later, Huancaco, dates intrusive graves and, probably, some later building levels. *Validity:* Both component collections rated as excellent /F.

V–189. *Name:* None. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad G–1, southwest and Quad G–2, northwest (on line). *Period:* Tomaval. A very few sherds of Puerto Moorin Period also present. *Validity:* Excellent /F.

V–190. *Name:* None. *Type of site:* Possible house group or Community Building. *Location:* Quad G–2, northwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–191. *Name:* None. *Type of site:* Rectangular Enclosure Compound *Location:* Quad G–2, northwest. *Period:* Tomaval. *Validity: Average* /F.

V–192. *Name:* None. *Type of site:* Irregular Agglutinated Village of terrace houses. *Location:* Quad E–1, northwest. *Period:* Huancaco. Very small percentages of Puerto Moorin wares. *Validity:* Average /F.

V–193. *Name:* None. *Type of site:* Rock-walled terrace houses. *Location:* Quad E–1, northwest. *Period:* Puerto Moorin (Early). *Validity:* Excellent /F.

V–194. *Name:* None. *Type of Site:* Irregular Agglutinated terrace houses. *Location:* Quad E–1, northwest. *Period:* Tomaval. *Validity:* Average /F.

V–195. *Name:* None. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad E–1, southwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–196. *None:* None. *Type of site:* Pyramid Mound. *Location:* Quad F–2, northwest. *Period:* Huancaco. Trivial occurrence of Puerto Moorin sherds. *Validity:* Poor /F.

V–197. *Name:* None. *Type of site:* Rectangular Enclosure Compounds and Irregular Agglutinated unit. *Location:* Quad G–2, northwest. *Period:* La Plata. *Validity:* Excellent /F.

V–198. *Name:* None. *Type of site:* Two Pyramid Mounds of earth and rock. *Location:* Quad G–2, northwest. *Period:* Two components. The earlier is Puerto Moorin (Early) and may date the mound or its lower levels. Re-use, and possibly additional construction of mound, dates from Tomaval. *Validity:* Excellent and average ratings /F.

V–199. *Name:* None. *Type of site:* Pyramid Mound of earth and rock with rock-walled multiroomed constructions on summit. *Location:* Quad G–2, northwest. *Period:* Two components, evenly represented. The earlier is Puerto Moorin (Early) and may date mound or part of it. The later is Huancaco and probably dates summit structures. *Validity:* Excellent and average /F.

V–200. *Name:* None. *Type of site:* Pyramid Mound of earth and rock. *Location:* Quad G–2, northwest. *Period:* No valid date. But surface observations of sherds suggest Puerto Moorin, Huancaco, and Tomaval components. *Validity:* Very questionable /W.

V–201. *Name:* None. *Type of site:* Rock-walled terrace houses. *Location:* Quad E–1, southeast. *Period:* Two components. The earlier, Puerto Moorin (Early), probably dates structures. The later, Huancaco, probably represents subsequent burials or refuse deposition. *Validity:* Both excellent /F.

V–202. *Name:* None. *Type of site:* Rock-walled terrace houses. *Location:* Quad E–1, southeast. *Period:* Two components. The earlier, Puerto Moorin (Early), probably dates the structures. The later, Huancaco, probably represents subsequent use or deposition on the site. *Validity:* Excellent and average /F.

V–203. *Name:* None. *Type of site:* Agglutinated Village of rock-walled terrace houses. *Location:* Quad E–1, southeast. *Period:* Two components. The earlier, Puerto Moorin (Early), probably dates the structures. The later, La Plata, probably represents subsequent graves and refuse at the site. *Validity:* Excellent and average /F.

V–204. *Name:* None. *Type of site:* Scattered and Agglutinated Patterns of rock-walled houses. *Location:* Quad E–1, southeast. *Period:* No valid date. But surface observation of sherds suggests Puerto Moorin and Tomaval occupations. Puerto Moorin probably dates some of the building foundations; Tomaval the others. *Validity:* Very questionable /W.

V–205. *Name:* Corral Bench-Mark Hill. *Type of site:* Hilltop Platform fortified site. *Location:* Quad E–1, southeast. *Period:* Puerto Moorin (Early) probably dates structures. Several looted graves in area date from La Plata. *Validity:* Excellent and poor /F.

V–206. *Name:* Corral Gate Mound. *Type of site:* Pyramid Mound of Earth, rock, and adobe. *Location:* Quad E–1, southeast. *Period:* Puerto Moorin (Early) and Huancaco. Mound probably built or, at least, begun, in earlier period. Huancaco burials and, possibly, additions. *Validity:* Both excellent /F.

V–207. *Name:* None. *Type of site:* Rock-walled house foundation. *Location:* Quad E–2, northeast. *Period:* No collection. No date.

V–208. *Name:* None. *Type of site:* Earth-rock Pyramid Mound. *Location:* Quad E–2, northeast. *Period:* Huancaco. A very few sherds of Puerto Moorin types also found at site. *Validity:* Average /F.

V–209. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad E–2, northeast. *Period:* Multiple components. The earliest, Puerto Moorin (Early), probably represents an old occupation. The structure is dated by either Huancaco or Tomaval elements. *Validity:* Poor, average, and average /F.

V–210. *Name:* None. *Type of site:* Irregular Agglutinated terrace houses. *Location:* Quad E–2, northeast. *Period:* Two components. The earlier is Puerto Moorin (Early); the later is Tomaval. It is likely that the later one dates the structures. *Validity:* Excellent and average /F.

V–211. *Name:* None. *Type of site:* Irregular Agglutinated unit. *Location:* Quad E–2, northeast. *Period:* Two components. The earlier, Puerto Moorin (Early) probably represents an old occupation; the later, Tomaval, seems to date the structures. *Validity:* Poor and excellent /F.

V–212. *Name:* None. *Type of site:* Hilltop Platform fortified site. *Location:* Quad E–2, northeast. *Period:* Multiple components. The earliest, which probably dates the first use of this hilltop site, is Puerto Moorin (Early); the later periods, which probably date later building and use, are Tomaval, La Plata, Estero, and Colonial. *Validity:* All poor /F.

V–213. *Name:* None. *Type of site:* Irregular Agglutinated terrace houses. *Location:* Quad E–2, northeast. *Period:* Two components. The earlier is Puerto Moorin (Early) and the later is Tomaval. It is questionable as to which component dates the structures although they are architecturally closer to the Tomaval Period. *Validity:* Excellent and average /F.

V–214. *Name:* None. *Type of site:* Irregular Agglutinated terrace houses. *Location:* Quad E–2, northeast. *Period:* Two components. Puerto Moorin (Early) and Tomaval. It is questionable as to which component dates the structures, although probabilities favor Tomaval Period. *Validity:* Excellent and average /F.

V–215. *Name:* None. *Type of site:* Pyramid Mound. *Location:* Quad E–2, northeast. *Period:* Gallinazo (Middle). *Validity:* Average /F.

V–216. *Name:* None. *Type of site:* Pyramid Mound. *Location:* Quad E–2, northeast. *Period:* Gallinazo (Late). *Validity:* Average /F.

V–217. *Name:* None. *Type of site:* Cemetery. *Location:* Quad E–2, northeast. *Period:* Tomaval. *Validity:* Average /F.

V–218. *Name:* None. *Type of site:* Cemetery. *Location:* Quad E–2, northeast. *Period:* Two components. Puerto Moorin (Early) and Tomaval. *Validity:* Average ratings /F.

V–219. *Name:* None. *Type of site:* Rectangular Enclosure Compound Village. *Location:* Quad E–2, northeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–220. *Name:* None. *Type of site:* Cemetery. *Location:* Quad E–2, northeast. *Period:* Huancaco. *Validity:* Excellent /F.

V–221. *Name:* None. *Type of site:* Earth-Rock Mound and associated walls. *Location:* Quad F–2, northeast. *Period:* Gallinazo (Middle). *Validity:* Excellent /F.

V–222. *Name:* None. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad F–2, northeast. *Period:* Tomaval. *Validity:* Poor /F.

V–223. *Name:* None. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad F–2, northeast. *Period:* Two components. The earlier, Puerto Moorin (Early), probably refers to early occupation of site; the later, Tomaval, probably dates structures. *Validity:* Both excellent /F.

V–224. *Name:* None. *Type of site:* Rock-walled house foundation. *Location:* Quad F–2, northeast. *Period:* No collection. No date.

V–225. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad F–2, northwest. *Period:* Tomaval. *Validity:* Average /F.

V–226. *Name:* None. *Type of site:* Semi-isolated Large House. *Location:* Quad F–2, northwest. *Period:* Tomaval. *Validity:* Poor /F.

V–227. *Name:* None. *Type of site:* Irregular Agglutinated Village of terrace houses. *Location:* Quad F–2, northwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–228. *Name:* None. *Type of site:* Irregular Agglutinated Village unit. *Location:* Quad F–2, northwest. *Period:* Multiple components. A Puerto Moorin (Early) Period occupation represents earliest use of site. A Huancaco component probably dates structures; and a Tomaval component indicates later use. *Validity:* Excellent, average, and poor /F.

V–229. *Name:* None. *Type of site:* Irregular Agglutinated rock-walled house groups. *Location:* Quad F–2, northwest. *Period:* The earlier component is Puerto Moorin (Early) and the later is Gallinazo (Late). The latter probably dates the structures. *Validity:* Both excellent /F.

V–230. *Name:* None. *Type of site:* Pyramid Mound of earth and rock. *Location:* Quad G–2, northwest. *Period:* Two components. Probably constructed in Puerto Moorin (Early). May have been added to, and certainly was re-used, in Huancaco. *Validity:* Average and excellent /F.

V–231. *Name:* Virú Viejo. *Type of site:* Castillo Fortification Complex. *Location:* Quad E–3, northwest. *Period:* Gallinazo (Middle). *Validity:* Excellent/F. *Comment:* Mentioned by Bennett (1939, p. 21), and located on site map by Larco Hoyle (1938–39, vol. 1, p. 62).

V–232. *Name:* Virú Viejo Cemetery. *Type of site:* Cemetery. *Location:* Quad E–3, northwest. *Period:* Huancaco. *Validity:* Excellent/F.

V–233. *Name:* None. *Type of site:* Dwelling-Construction Mound. May be partly or all artificial. Some adobes. *Location:* Quad D–4, northeast. *Period:* Huancaco. Very small percentages of Puerto Moorin sherds. *Validity:* Average/F.

V–234. *Name:* None. *Type of site:* Earth-Refuse Mound. May be partly or all artificial. *Location:* Quad D–4, northeast. *Period:* Two components. The earlier is Puerto Moorin (Early) and the later La Plata. *Validity:* Average and excellent/F.

V–235. *Name:* Taitacantin. *Type of site:* Dwelling-Construction Mound on a natural dune. *Location:* Quad D–3, southwest, and D–4, northwest (in both quads). *Period:* Sherd collection dates as Gallinazo (Early). Presumably, this is occupational refuse material. Excavations by both Olson and Bennett (Bennett, 1939, pp. 51–53) revealed graves of the Tomaval Period. *Validity:* Average and excellent/F. *Comment:* There is some confusion over the name and location of this site. Kroeber (1930, pp. 79–80) used this name to refer to a nearby site (V–238) which is usually called Huaca Larga. Bennett (1939, pp. 21 and 51–53) calls V–235 by the name Taitacantin. Larco Hoyle (1938, p. 62) refers to a site in this general vicinity as "Huaca de Taita Cautín."

V–236. *Name:* None. *Type of site:* Earth-Refuse Mound. May be only partly artificial. *Location:* Quad D–4, northwest. *Period:* Multiple components. The earliest is Puerto Moorin (Early); the next Huancaco; and the latest Tomaval. *Validity:* Rated as excellent, average, and average/F.

V–237. *Name:* None. *Type of site:* Dwelling-Construction Mound. May or may not be entirely artificial. *Location:* Quad D–4, northwest. *Period:* Huancaco. *Validity:* Average/F.

V–238. *Name:* Huaca Larga. (See Bennett, 1939, p. 22, and Kroeber, 1930, pp. 79–80. Kroeber refers to this site by the name "Taitacantin.") *Type of site:* Dwelling-Construction Mound on an old stabilized sand dune. *Location:* Quad D–4, centrally located. *Period:* Two components known. A large surface collection, representing living refuse, is dated as Gallinazo (Late). Kroeber observed graves somewhere on the site that date as Tomaval. *Validity:* Both components rate as excellent/F and B. *Comment:* Larco Hoyle (1938–39, vol. 1, p. 62) uses this name for a site, but his location appears north and east of ours and probably refers to a different site.

V–239. *Name:* None. (Bennett, 1939, p. 21, lists it as "Small huaca with a cross on top near the Huaca de la Cruz.") *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad D–3, southwest, *Period:* Gallinazo (Late). *Validity:* Excellent/F. *Comment:* Larco Hoyle (1938–39, vol. 1, p. 62) maps a site at this location which he calls "Huaca de Huancaco."

V–240. *Name:* Mochan or Huaca Amarilla. (See Bennett, 1939, p 22.) *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. *Location:* Quad C–3, southeast. Bennett (1939, fig. 1) locates Mochan on the south side of the river. This is incorrect. It is situated very near his location but on the north side of the river. Larco Hoyle (1938, p. 62) places it correctly. *Period:* Gallinazo (Late). *Validity:* Excellent/F.

V–241. *Name:* None. *Type of site:* Earth-Refuse Mound. May or may not be artificial. *Location:* Quad C–3, southwest. *Period:* Gallinazo (Late). *Validity:* Excellent/F.

V–242. *Name:* None. *Type of site:* Earth-Refuse Mound, apparently all artificial. *Location:* Quad C–3, southwest. *Period:* Huancaco. *Validity:* Poor/F.

V–243. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–3, southwest. *Period:* No date.

V–244. *Name:* None. *Type of site:* Earth-Refuse Mound. At least partly artificial. *Location:* Quad C–3, southwest. *Period:* Tomaval. *Validity:* Excellent/F.

V–245. *Name:* None. *Type of site:* Pyramid Mound. *Location:* Quad B–3, southeast. *Period:* Huancaco. *Validity:* Excellent/F.

V–246. *Name:* Calunga Compound. *Type of site:* Great Rectangular Enclosure Compounds. *Location:* Quad C–3, southwest. *Period:* Tomaval. *Validity:* Poor/F.

V–247. *Name:* None. *Type of site:* Earth Mound. *Location:* Quad C–3, southwest. *Period:* Gallinazo (Late). *Validity:* Average/F.

V–248. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–3, southwest. *Period:* Huancaco. *Validity:* Excellent/F.

V–249. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad C–3, southwest. *Period:* Huancaco. *Validity:* Average/F.

V–250. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad C–3, southwest. *Period:* Two components. The earlier is Gallinazo (Middle and Late); the later is Huancaco. Huancaco is defintely represented by summit burials; the mound may date from this period but is probably earlier. *Validity:* Both average /F.

V–251. *Name:* None. *Type of site:* Earth-Refuse Mound, artificial. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Middle and Late). *Validity:* Collections from test excavations made by Willey. Rated as excellent/F.

V–252. *Name:* None. *Type of site:* Dwelling-Construction Mound. Numerous burials. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Late) burials; possibly earlier Gallinazo refuse. *Validity:* Excellent/B, W, C.

V–253. *Name:* None. *Type of site:* Midden area and cemetery. *Location:* Quad B–4, northwest. *Period:* Tomaval, La Plata, and Estero. *Validity:* No collection. Observation of surface sherds by Willey. Rated as poor /W.

V–254. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad B–4, southwest. *Period:* No date.

V–255. *Name:* None. *Type of site:* Cemetery and Semi-isolated Large House adobe structure. *Location:* Quad B–5, northwest. *Period:* Tomaval and La Plata. *Validity:* Both average /F.

V–256. *Name:* None. *Type of site:* Cemetery area and Semi-isolated Large House adobe structure. *Location:* Quad B–5, northwest. *Period:* Tomaval, La Plata, Estero. *Validity:* Excellent, average, average /F.

V–257. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Early and Middle). *Validity:* Excellent /B.

V–258. *Name:* None. *Type of site:* Dwelling-Construction Mounds. Group of three. *Location:* Quad B–4, southwest. *Period:* Multiple components. Surface collection by Ford dated as Gallinazo (Late). Bennett (1939, pp. 76–77) found Huancaco, Tomaval, and La Plata materials on surface and upon excavation. He also found some Gallinazo Period types. *Validity:* All excellent /F and B.

V–259. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–5, northwest. *Period:* Gallinazo (Late), Huancaco, Tomaval. *Validity:* Excellent /B and W. *Comment:* This site was tested by Bennett (1939, p. 76) who listed it as "Ca–4."

V–260. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Late) and Huancaco. *Validity:* Fair /B.

V–261. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Late) and Huancaco. *Validity:* Fair /B.

V–262. *Name:* None. *Type of site:* Earth Mound. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Late). *Validity:* Fair /B.

V–263. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Late). *Validity:* Fair /B.

V–264. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–4, northwest. *Period:* Tomaval. *Validity:* Excellent /F.

V–265. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Early and Late). Occupation and structures probably Early with Late intrusive burials. *Validity:* Excellent /F and B.

V–266. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–4, southwest. *Period:* Gallinazo (Middle). *Validity:* Excellent /F.

V–267. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–4, southwest. *Period:* Huancaco. *Validity:* Excellent /F.

V–268. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–4, southwest. *Period:* No collection and no date.

V–269. *Name:* Huaca del Caballero. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad B–5, northeast. *Period:* La Plata. *Validity:* Average /F.

V–270. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad C–4, northeast. *Period:* Gallinazo (Middle). *Validity:* Excellent /F.

V–271. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northwest. *Period:* Huancaco. *Validity:* Average /F.

V–272. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northwest. *Period:* Multiple components Guañape (Late), Puerto Moorin, and Gallinazo represented in refuse levels. Gallinazo and Huancaco burials also found in mound summit. *Validity:* Excellent. Excavated by Collier.

V–273. *Name:* None. *Type of site:* Dwelling-Construction Mounds. *Location:* Quad C–4, northwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–274. *Name:* None. *Type of site:* Dwelling-Construction Mounds. *Location:* Quad C–4, northwest. *Period:* Gallinazo (Middle). *Validity:* Excellent /F.

V–275. *Name:* None. *Type of site:* Earth or adobe mound with adobe constructions. *Location:* Quad C–4, northwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–276. *Name:* None. *Type of site:* Pyramid Mound. Some adobe construction. *Location:* Quad B–4, southeast. *Period:* Huancaco. *Validity:* Excellent /F. *Comment:* Bennett (1939, pp. 75–76) refers to a group of mounds under the designation "Ca–1" in Potrero Cinco or Field Five. This mound seems to be one of the most northeasterly of that group.

V–277. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, southeast. *Period:* Gallinazo (Middle). *Validity:* Excellent /F. *Comment:* Probably one of Bennett's (1939) "Ca–1" group.

V–278. *Name:* None. *Type of site:* Midden area. *Location:* Quad C–4, northeast. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–279. *Name:* Huaca de la Vela. This is distinct from Las Velas (V–156). *Type of site:* Pyramid-Dwelling-Construction Complex of adobe. Second only to Gallinazo (V–59) in size. *Location:* Quad D–2, northwest. *Period:* Gallinazo. *Validity:* Observation of surface materials by

Bennett. No collection. Validity fair. *Comment:* Larco Hoyle (1938–39, vol. 1, p. 62) refers to a site location in this vicinity as "Grupo de Las Velas."

V–280. *Name:* Huaca Verde. *Type of site:* Pyramid-Dwelling-Construction Complex. *Location:* Quad B–3, southeast. *Period:* Huancaco. *Validity:* Excellent /F.

V–281. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–3, northwest. *Period:* Gallinazo (Late). *Validity:* Poor /F.

V–282. *Name:* La Centinela. *Type of site:* Semi-isolated Large House. *Location:* Quad B–2, southwest. *Period:* Tomaval. *Validity:* Average /F.

V–283. *Name:* None. *Type of site:* Midden area. *Location:* Quad A–3, southeast. *Period:* La Plata. *Validity:* Average /F.

V–284. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–285. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad B–4, northwest. *Period:* Gallinazo (Late). *Validity:* Excellent /F.

V–286. *Name:* None. *Type of site:* Series of *pukio* irrigation cribs and scattered midden. *Location:* Quad B–4, northwest. *Period:* Multiple components. Tomaval, La Plata, Estero, and Colonial represented. *Validity:* Poor /F.

V–287. *Name:* Potrero Cinco. *Type of site:* Earth-Refuse Mound. One of a close-clustered group. *Location:* Quad B–4, northeast. *Period:* Tomaval Period collection gathered from surface of one of these mounds. Bennett (1939, pp. 75–76) made a test cut into one of the mounds ("Ca–1") and surface collections from others. The materials which he found indicate Tomaval and Huancaco datings. *Validity:* Generally excellent /B and F.

V–288. *Name:* None. *Type of site:* Adobe Pyramid Mound. *Location:* Quad B–4, southeast. *Period:* Huancaco. *Validity:* Average /F. *Comment:* Probably one of group of sites mentioned by Bennett (1939) as "Ca–1."

V–289. *Name:* None. *Type of site:* Earth Mound. *Location:* Quad B–4, southeast. *Period:* Gallinazo (Late). *Validity:* Average /F. *Comment:* Probably one of sites mentioned by Bennett (1939) as "Ca–1."

V–290. *Name:* None. *Type of site:* Possible Pyramid Mound of adobe. *Location:* Quad B–4, southeast. *Period:* Puerto Moorin (Late). *Validity:* Excellent /F. *Comment:* Probably one of sites mentioned by Bennett 1939) as "Ca–1."

V–291. *Name:* Carmelo Hacienda, Mound No. 1. *Type of site:* Earth-Refuse Mound. *Location:* Quad B–5, northeast. *Period:* Multiple components. Huancaco, Tomaval, and La Plata represented in Ford-Willey collection. Bennett (1939, p. 76) reports Huancaco (Early Chimu) materials from either this or the two neighboring sites (V–292, V–293). He lists all three mounds as "Ca–3." *Validity:* Average /F and B.

V–292. *Name:* Carmelo Hacienda, Mound No. 2. *Type of site:* Earth-Refuse Mound or group of small Earth-Refuse Mounds. *Location:* Quad B–5, northeast. *Period:* Only Tomaval represented in the Ford-Willey collection. *Validity:* Excellent /F. *Comment:* This is one of Bennett's "Ca–3" sites.

V–293. *Name:* Carmelo Hacienda, Mound No. 3. *Type of site:* Earth-Refuse Mound. *Location:* Quad B–5, northeast. *Period:* Gallinazo (Late) is only component represented in Ford-Willey collection. *Validity:* Excellent /F. *Comment:* This is one of Bennett's "Ca-3" sites.

V–294. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, southeast. *Period:* Gallinazo (Late). *Validity:* Excellent/F.

V–295. *Name:* None. *Type of site:* Dwelling-Construction Mounds. *Location:* Quad B–4, southeast. *Period:* Huancaco. *Validity:* Excellent/F.

V–296. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, southeast. *Period:* Gallinazo (Late). *Validity:* Excellent/F.

V–297. *Name:* Delta site. *Type of site:* Rectangular Enclosure Compound. *Location:* Quad B–5, southeast. *Period:* Tomaval. *Validity:* Excellent/F.

V–298. *Name:* San Francisco Mound No. 1. *Type of site:* Earth and rock Pyramid Mound. *Location:* Quad D–3, northeast. *Period:* Tomaval. *Validity:* Average/F. *Comment:* Bennett (1939, p. 21) mentions a group of four mounds under this name. This is one of them. Sites V–299 and V–300 are also in the same group.

V–299. *Name:* San Francisco Mound No. 2. *Type of site:* Earth, rock, and adobe Pyramid Mound. *Location:* Quad D–3, northeast and Quad C–4, northeast (on line). *Period:* Tomaval. *Validity:* Excellent/F.

V–300. *Name:* San Francisco Mound No. 3. *Type of site:* Pyramid Mound of earth and rock. *Location:* Quad D–3, northeast. *Period:* Two components. The earlier, represented by only a few sherds is Puerto Moorin (Early). The later is Tomaval. It is most likely that the bulk of the mound dates from the later period. *Validity:* Both average/F.

V–301. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–5, northwest. *Period:* Tomaval. *Validity:* Excellent/C.

V–302. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northwest. *Period:* Multiple components. The strata, as revealed by Collier's excavations, are as follows: Guañape (Late), Puerto Moorin, Gallinazo, and Huancaco. In addition, intrusive Tomaval burials were found in the mound. *Validity:* Excellent/C. *Comment:* Refuse without ceramics at the bottom of the site may represent Cerro Prieto Period.

V–303. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad B–4, northwest. *Period:* Gallinazo. *Validity:* Excellent/C. *Comment:* This is the other of two small mounds near Bennett's (1939) site "Ca-10c" (V–152). (See also site V–163.)

V–304. *Name:* None. *Type of site:* Cemetery. *Location:* Quad B–5, northwest. *Period:* La Plata and Estero. *Validity:* Average/C.

V–305. *Name:* None. *Type of site:* Midden area. *Location:* Quad B–5, northwest. *Period:* Tomaval and La Plata. *Validity:* Excellent/C.

V–306. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northwest. *Period:* Multiple components revealed in surface collection analysis. Guañape (Late), Puerto Moorin, and Gallinazo (Early) all recorded. *Validity:* Average/C.

V–307. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northwest. *Period:* Gallinazo refuse and Huancaco burials. *Validity:* Average/C.

V–308. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northeast. *Period:* Gallinazo refuse and Huancaco burials. *Validity:* Average/C.

V–309. *Name:* None. *Type of site:* Earth-Refuse Mound. *Location:* Quad C–4, northwest. *Period:* Guañape, Puerto Moorin, and Gallinazo (all apparently full period representations). *Validity:* Excellent/C.

V–310. *Name:* None. *Type of site:* Dwelling-Construction Mound. *Location:* Quad C–4, northeast. *Period:* Gallinazo, Huancaco, and Tomaval. The last represented by burials. *Validity:* Fair/C.

V–311. *Name:* None. *Type of site:* Refuse buried by deep sediments. *Location:* Quad D–3, southwest. *Period:* Multiple occupation. Guañape, Gallinazo, La Plata. *Validity:* Good/Bird and F.

V–312. *Name:* None. *Type of site:* Irregular Agglutinated unit in rock-shelter. *Location:* Quad D–2, northeast. *Period:* Tomaval and La Plata. *Validity:* Poor/Bird and F.

V–313. *Name:* None. *Type of site:* Cemetery and midden area in and below shallow cave. *Location:* Quad F–4, northwest. *Period:* Cemetery dates as La Plata. Earlier Guañape midden below cave mouth. *Validity:* Average/Bird and F.

V–314. *Name:* Also referred to as "Huaca Prieta de Guañape." *Type of site:* Deep midden area. *Location:* Quad A–3, southeast. *Period:* Cerro Prieto. *Validity:* Average/Bird.

V–315. *Name:* Also referred to as "Huaca Prieta de Guañape." *Type of site:* Deep midden area. *Location:* Quad A–3, southeast. *Period:* Cerro Prieto. *Validity:* Average/Bird.

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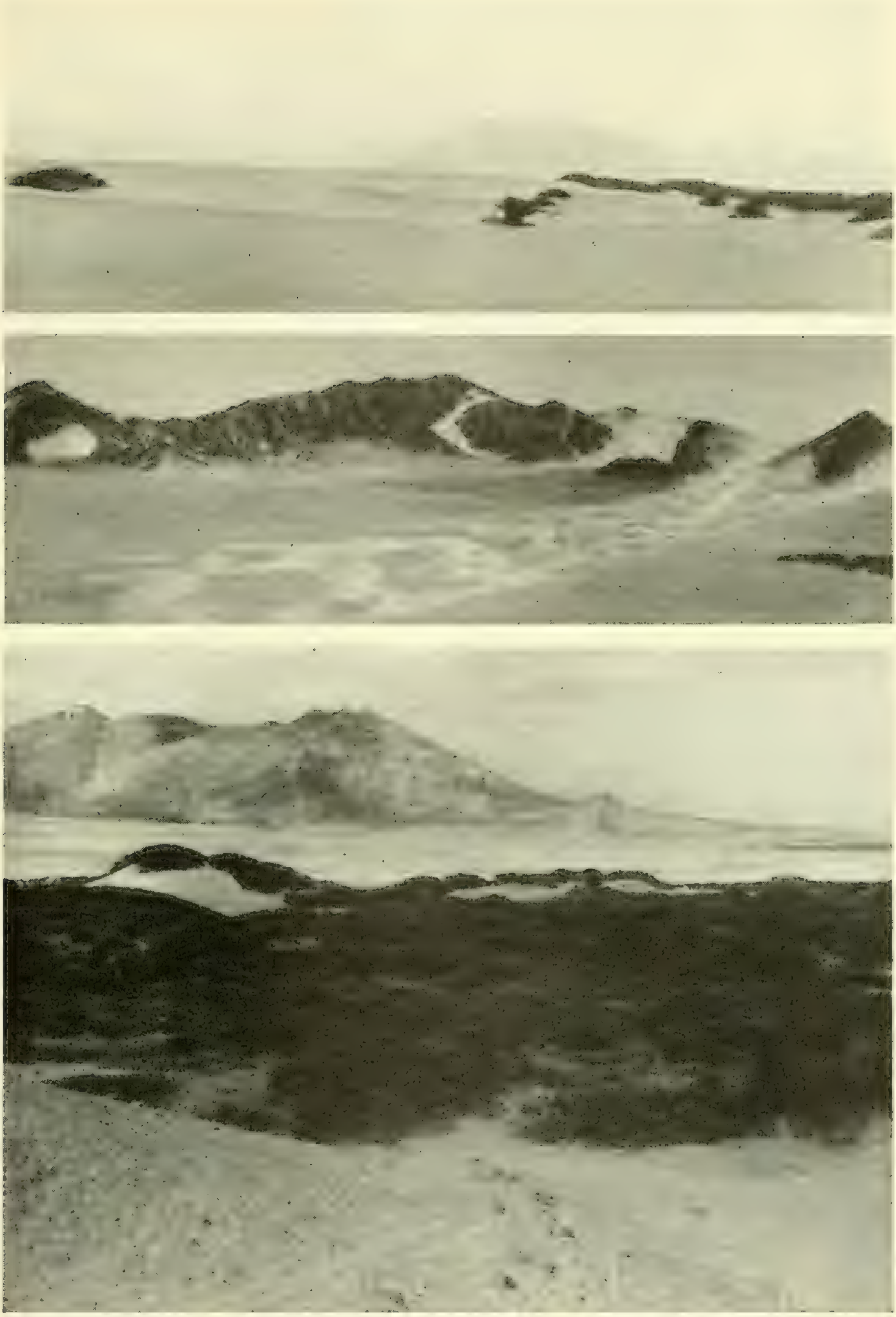
SURVEY

Top: Jeep transportation. *Center:* Field checking of site maps. *Bottom:* Jeep with air photo quads mounted on drawing board. (Center photo courtesy McBryde.)

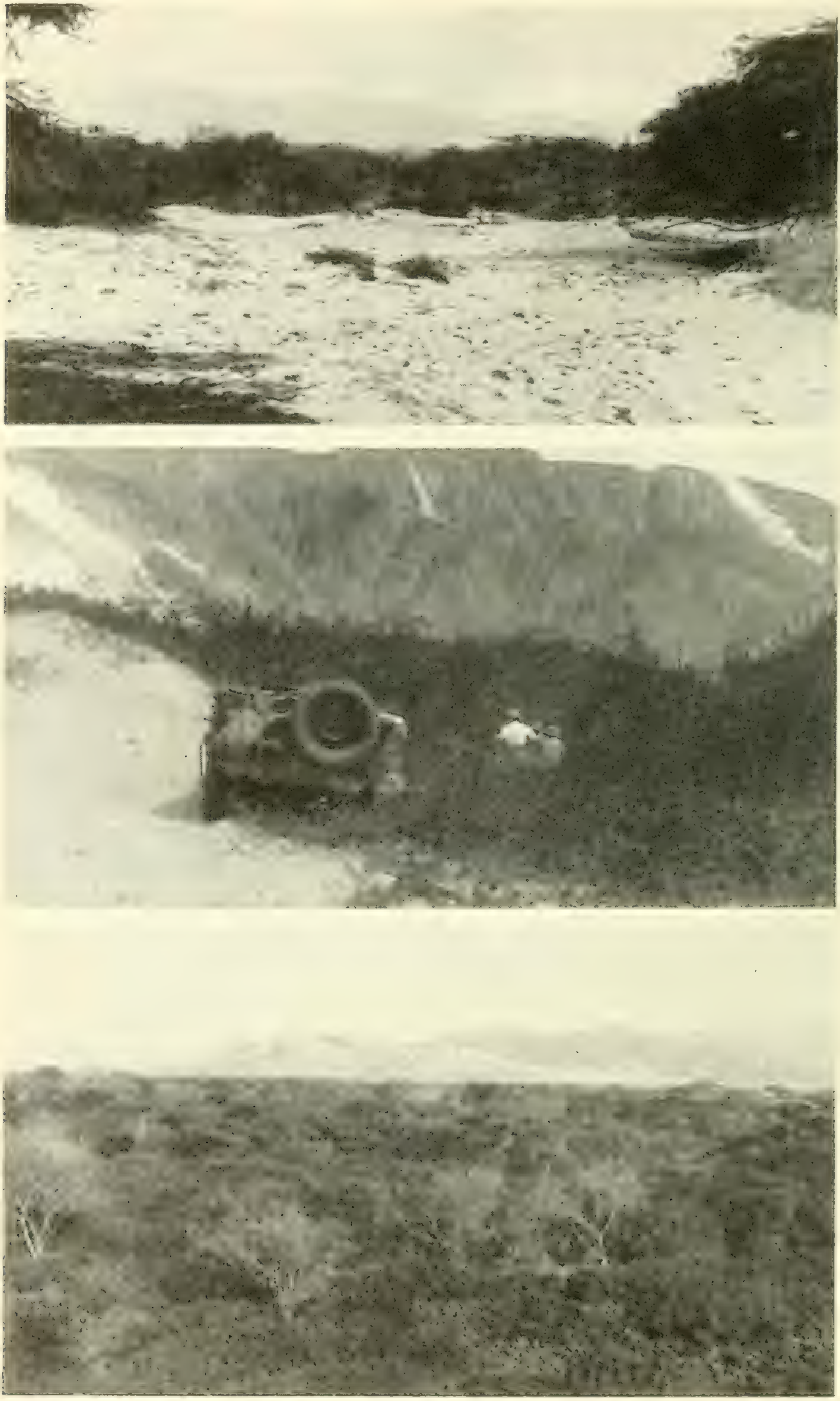
GRASSY DUNES AND BEACH IN VIRÚ

Top: Rolling, stabilized dunes just back of active beach near delta. *Center:* Camp behind barrier dune ridge with ocean in background. *Bottom:* Looking along old beach line. (Center photo courtesy Evans.)



VIRÚ DESERT AND WASTELANDS

Top: Sands at edge of Valley, Middle Virú-South. *Center:* Series of active lunate dunes advancing across hills toward Valley bottom in Lower Virú-South. *Bottom: Monte,* desert, and bordering hills in Lower Virú-South.

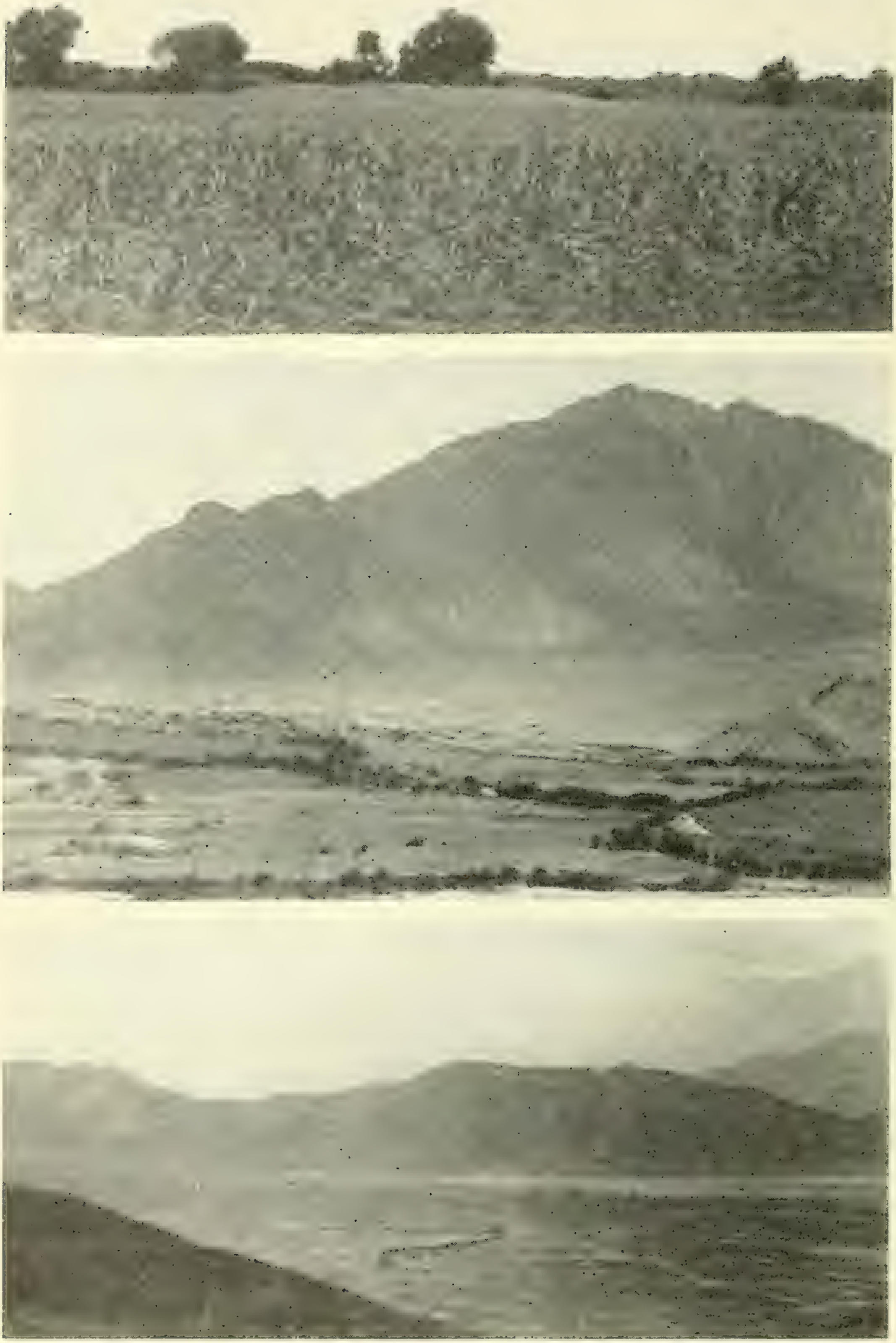


SCRUB GROWTH OR MONTE

Top: Cleared area near river in Lower Virú-South. *Center:* Cutting a trail through the *monte* in Lower Virú-South. *Bottom:* The completely *monte*-filled bottom of the lower Chao Valley. (Did the valleys look like this in earliest prehistoric times?)

MOUNTAINS, VALLEY FLOOR, AND INUNDATED LANDS

Top: Typical hilltop site for prepared house platforms. *Center:* View along river bank near middle of Valley. *Bottom:* Temporary lagoon in the *monte* of Lower Virú-Nort during the unusually wet year, 1946. (Center photo courtesy Evans.)

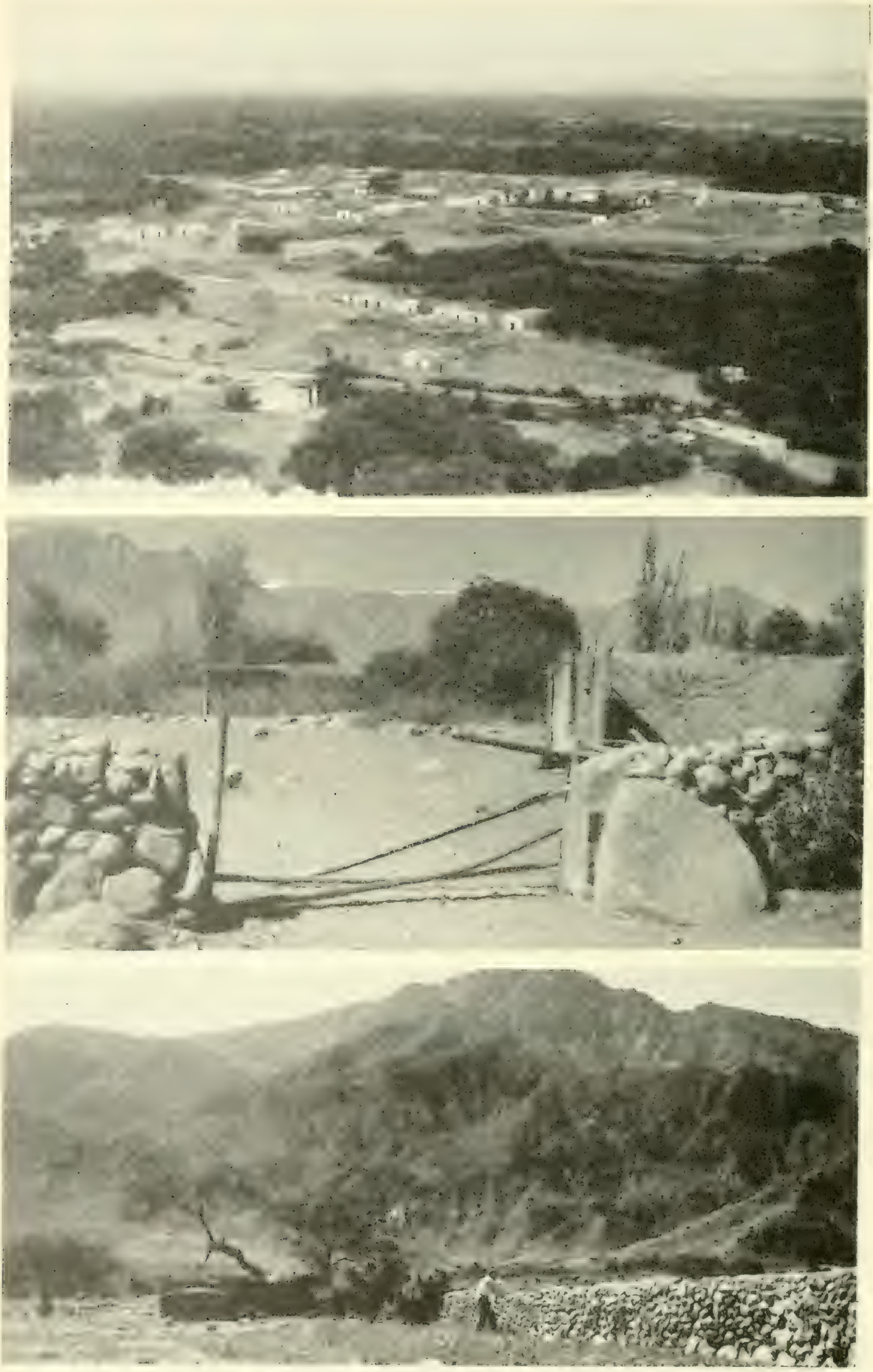


CULTIVATED VALLEY BOTTOMS AND BARREN QUEBRADAS

Top: Looking across cornfields at mound site, V–272. *Center:* The Queneto quebrada from the northeast. *Bottom:* Looking across Queneto quebrada from southwest side (note old wall and road).

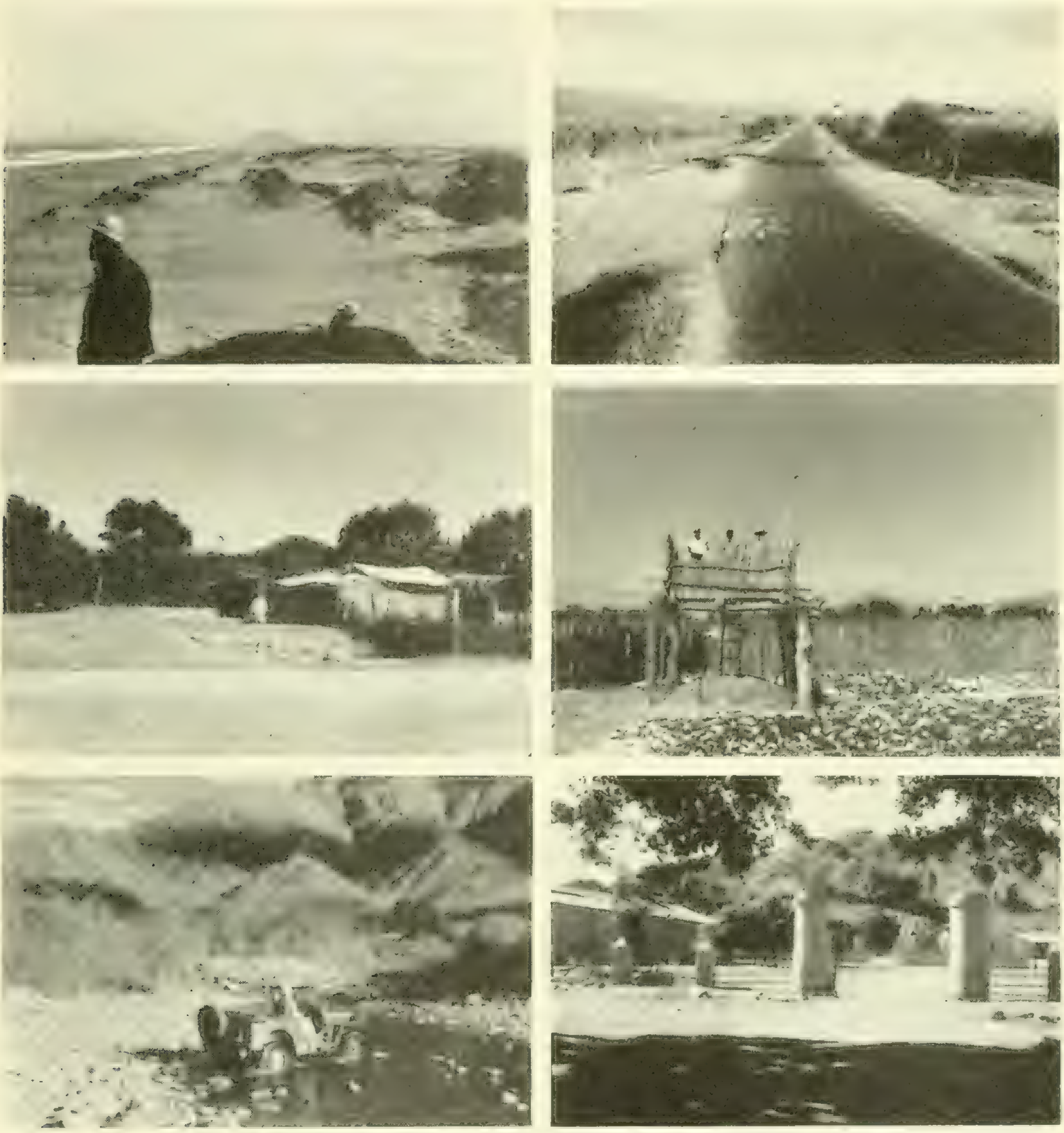
THE UPPER HUACAPONGO

Top: Looking across narrow, rocky Valley bottom, from north, at a point near site V–179. *Center:* View up the Huacapongo from the point of our furthest exploration. *Bottom:* Boulder-strewn stream channel of the Upper Huacapongo.



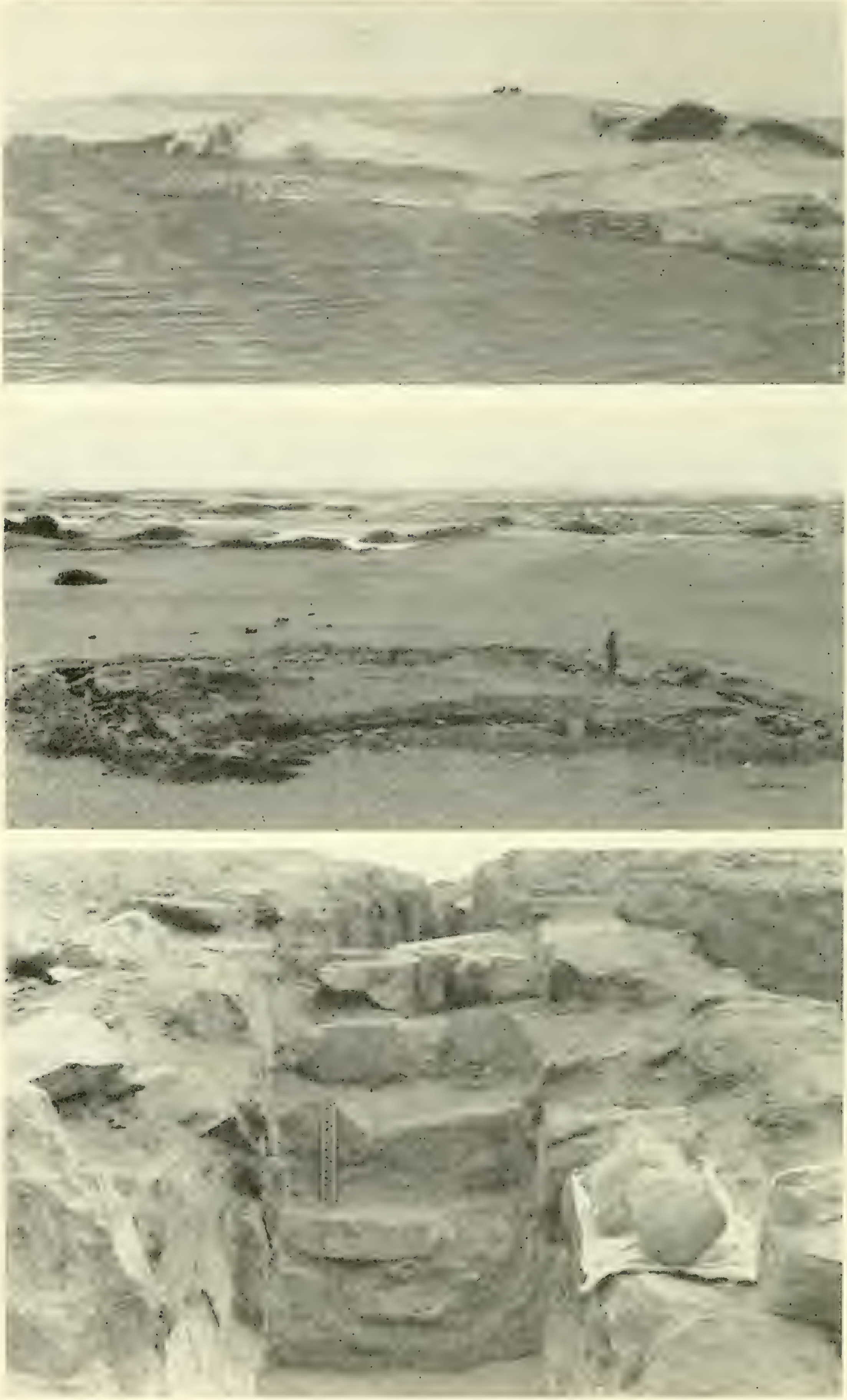
MODERN HABITATION IN VIRÚ

Top: Pueblo Virú from the Cerro Virú or Santa Clara. *Center:* Main gate to walled community of Huacapongo. *Bottom:* Modern stone wall and wattle-and-daub house, Huacapongo. (Center and bottom photos courtesy Evans.)



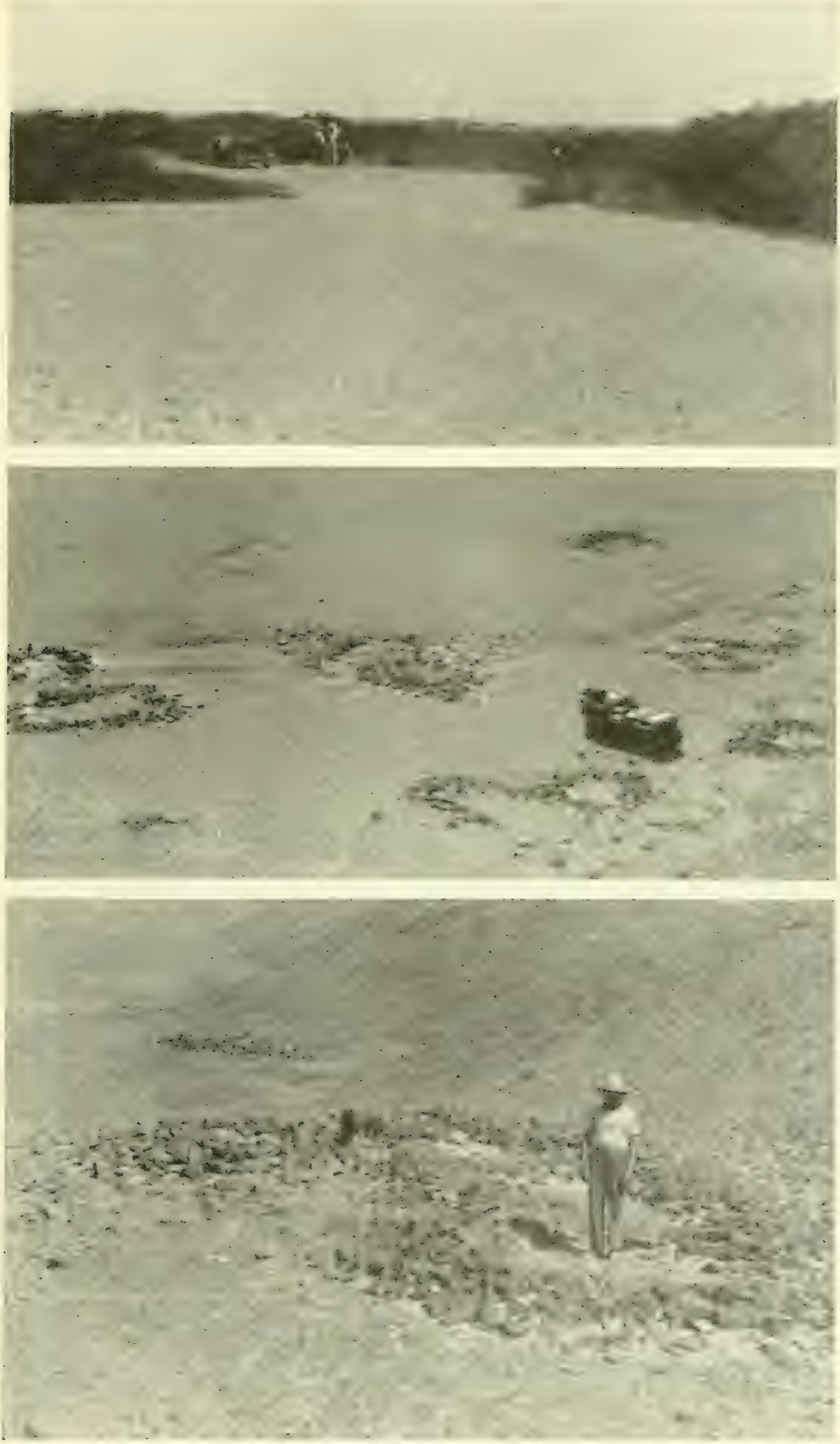
VIRÚ VIEWS

Top, left: Looking along dune barriers back of beach. *Top, right:* Pan-American Highway. *Center, left:* Modern dwelling (wattle-and-daub) in Lower Virú. *Center, right:* Shelling corn in a *barbacoa*. *Bottom, left:* Upper Huacapongo. *Bottom, right:* Main gates, Hacienda Tomaval.



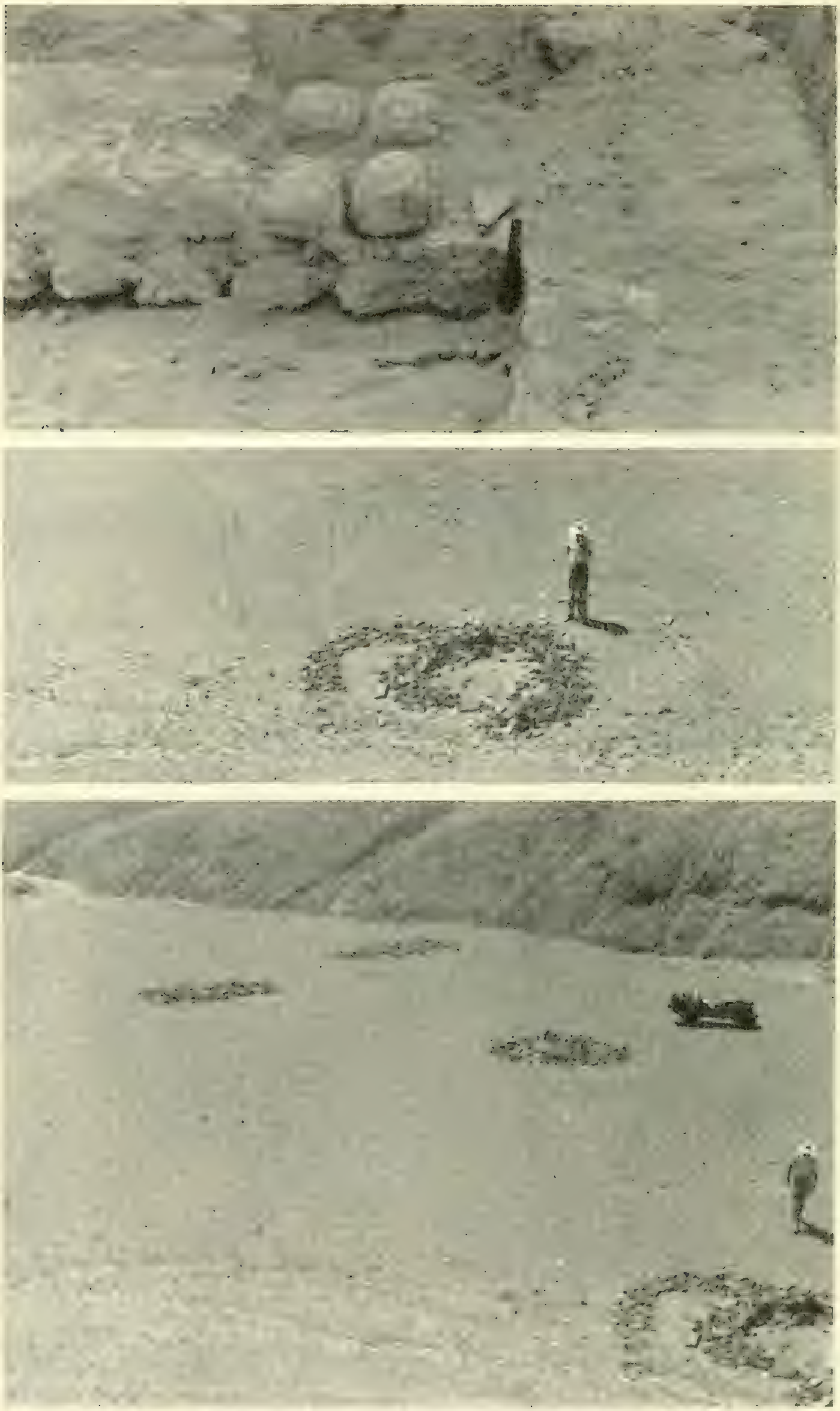
HUACA PRIETA DE GUAÑAPE (V–71)

Top: The refuse mound with a natural lagoon in the foreground. *Center:* Excavating temple at V–71. *Bottom:* Stone and mud steps to temple at V–71 (note the conical adobes lying on white cloth). (All photos courtesy Strong and Evans.)



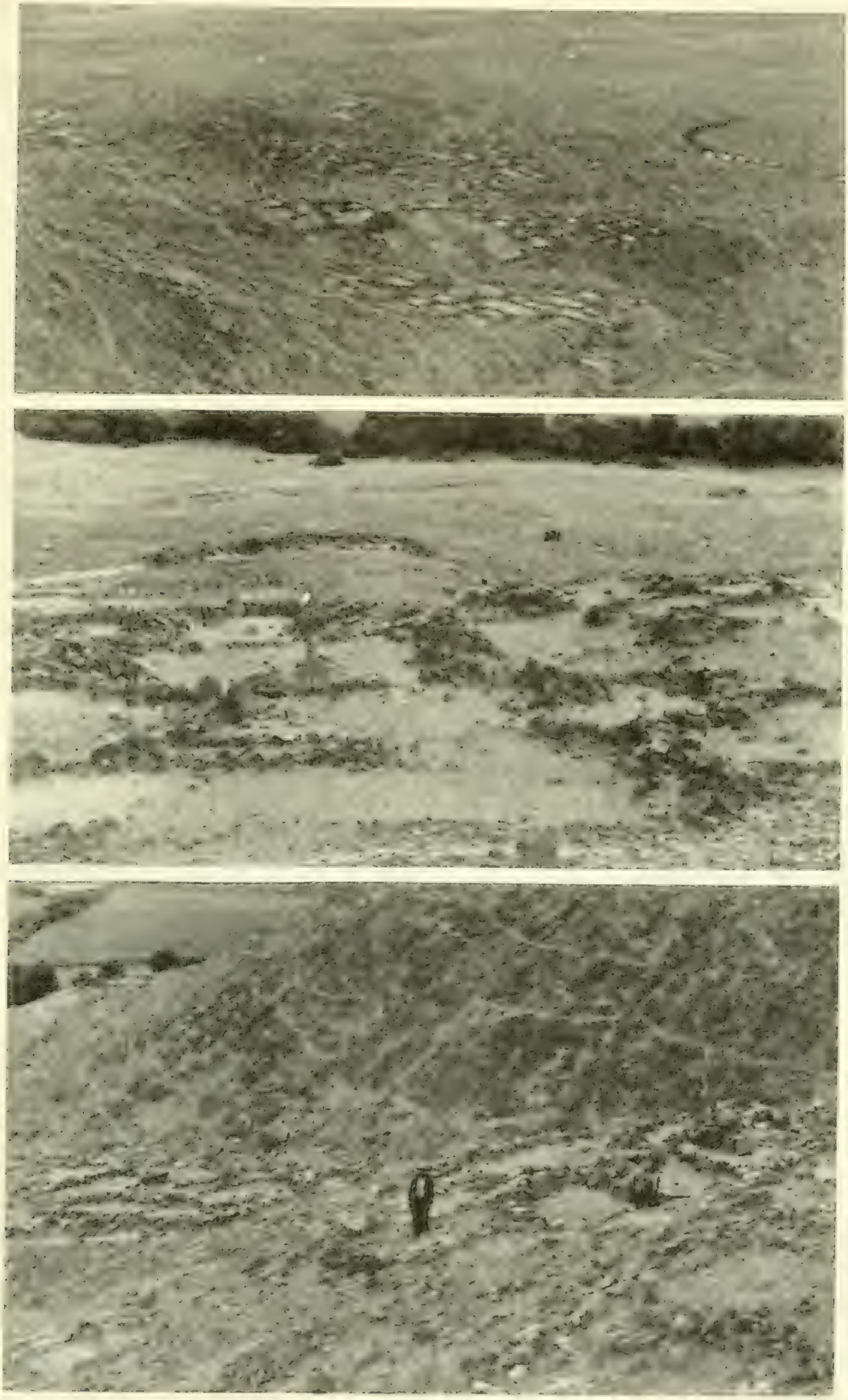
Guañape Period Sites

Top: V–100 midden area. *Center:* Scattered Small-House Village, V–85, from hill above. *Bottom:* House site in V–83.



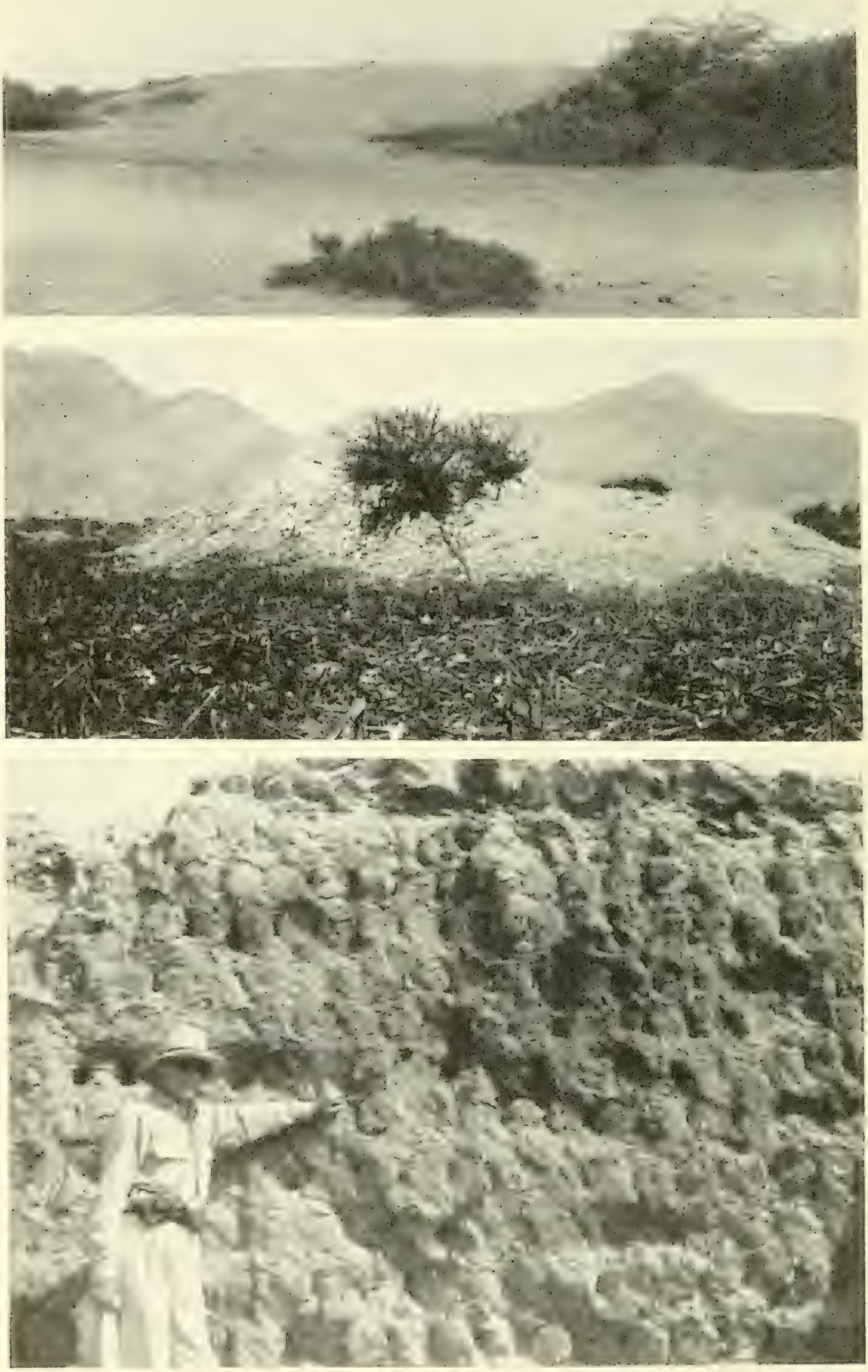
PUERTO MOORIN PERIOD DWELLING SITES

Top: Foundations of odontiform adobes at V–66. *Center:* House foundation of stone at V–86. *Bottom:* Scattered Small-Houses at V–86. (Top photo courtesy Strong and Evans.)



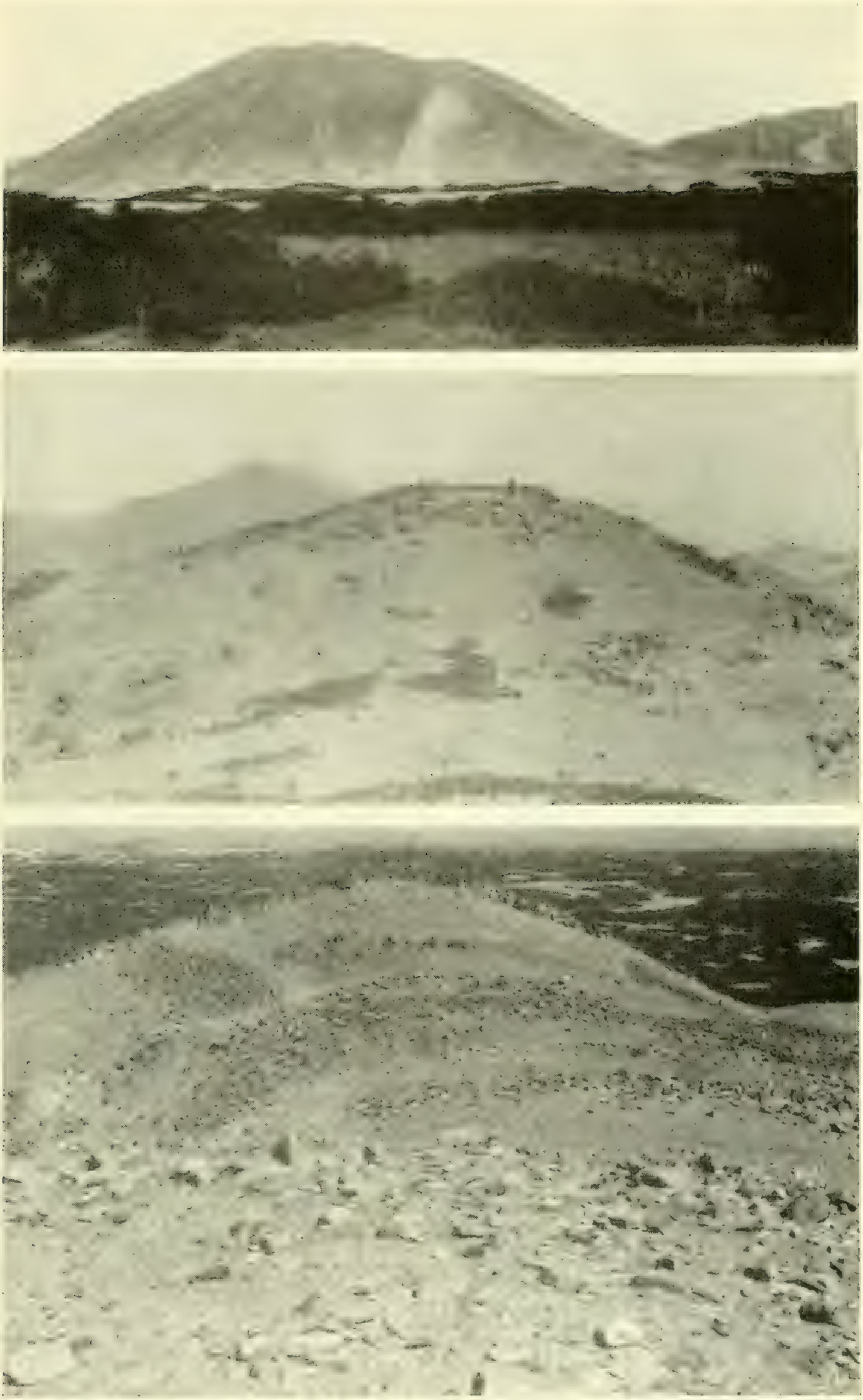
PUERTO MOORIN IRREGULAR AGGLUTINATED VILLAGES ON THE HUACAPONGO-NORTH HILLSIDES

Top: Looking over V–146 and beyond. *Center:* V–144. *Bottom:* V–203.



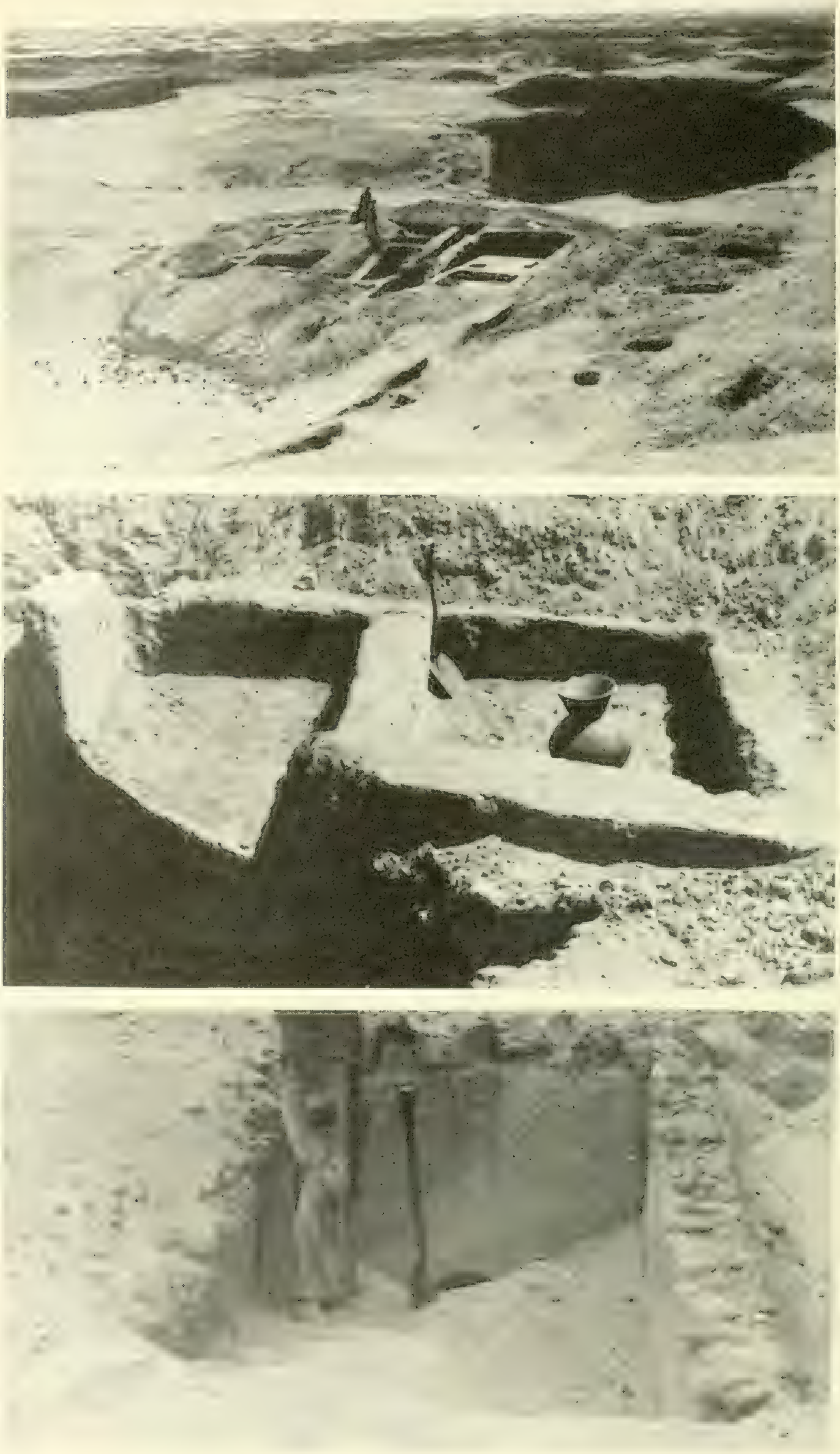
PUERTO MOORIN PYRAMID MOUNDS

Top: V–95 in Lower Virú-North. *Center:* V–187 in Upper Huacapongo. *Bottom:* Old cross section of rock-covered conical adobe structure V–103, opposite mouth of Queneto quebrada. (Bottom photo courtesy Bennett.)



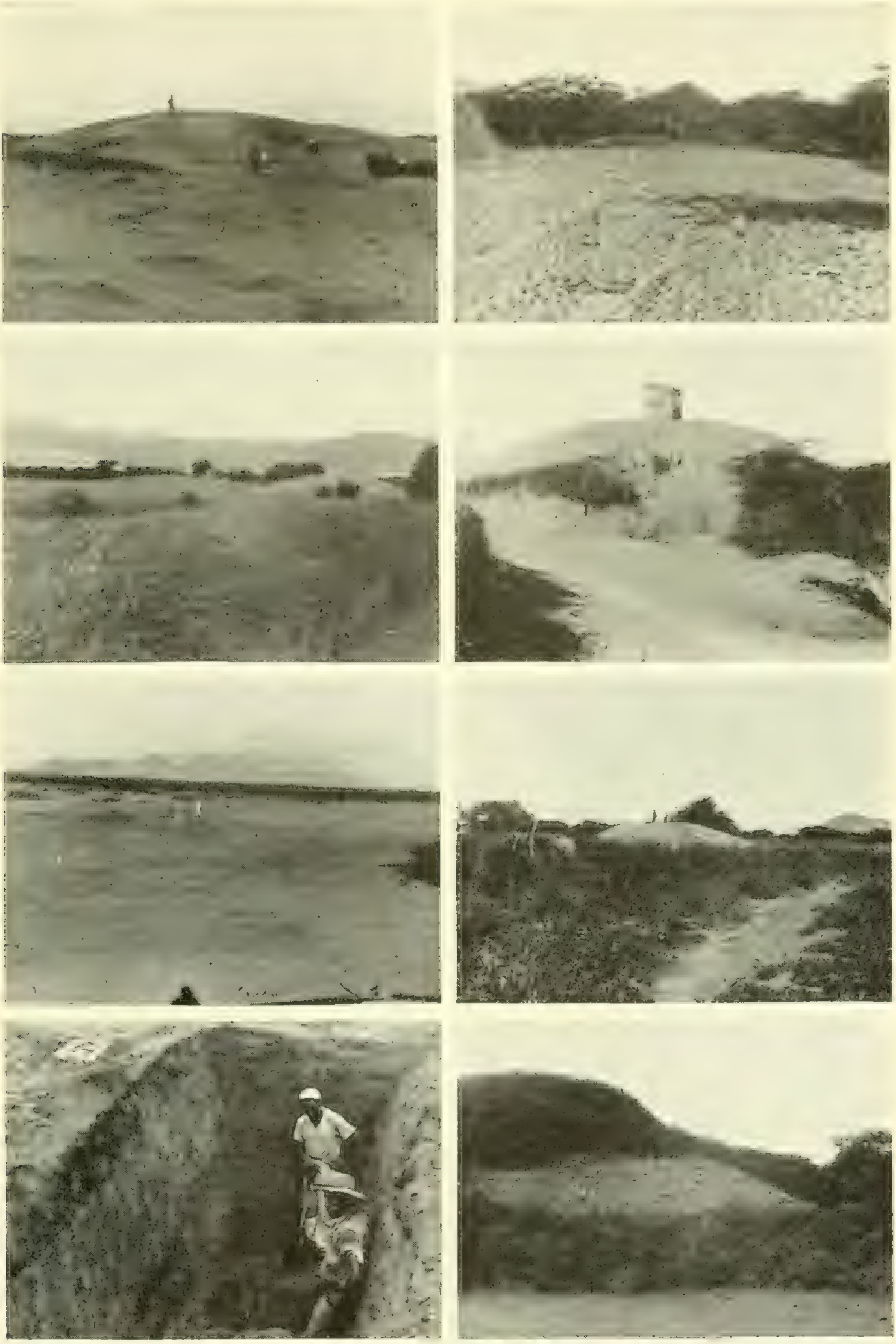
Hilltop Redoubts of the Puerto Moorin Period

Top: Cerro Bitín (V–80) from the northwest. *Center:* East pyramid on Bitín, taken from central knoll. *Bottom:* Central pyramid on Cerro del Piño (V–132) with natural rock dike in background.



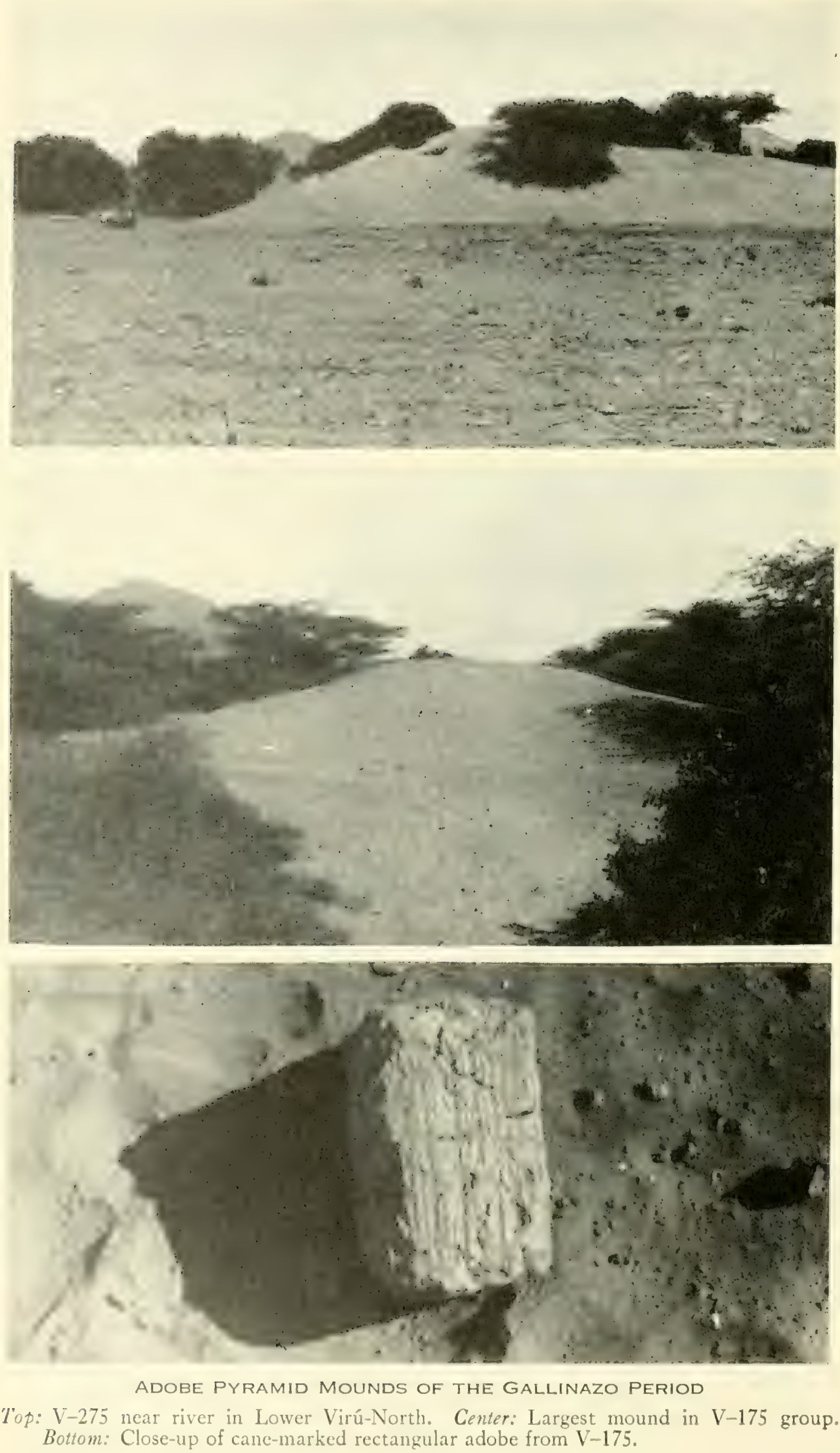
GALLINAZO PERIOD ADOBE-WALLED DWELLINGS

Top: Excavation of some "honeycomb" rooms at V–59. *Center:* Conjoined room foundations at V–59. *Bottom:* Adobe-walled and plastered room at V–131. (Top photo courtesy Bennett; center, Strong and Evans.)



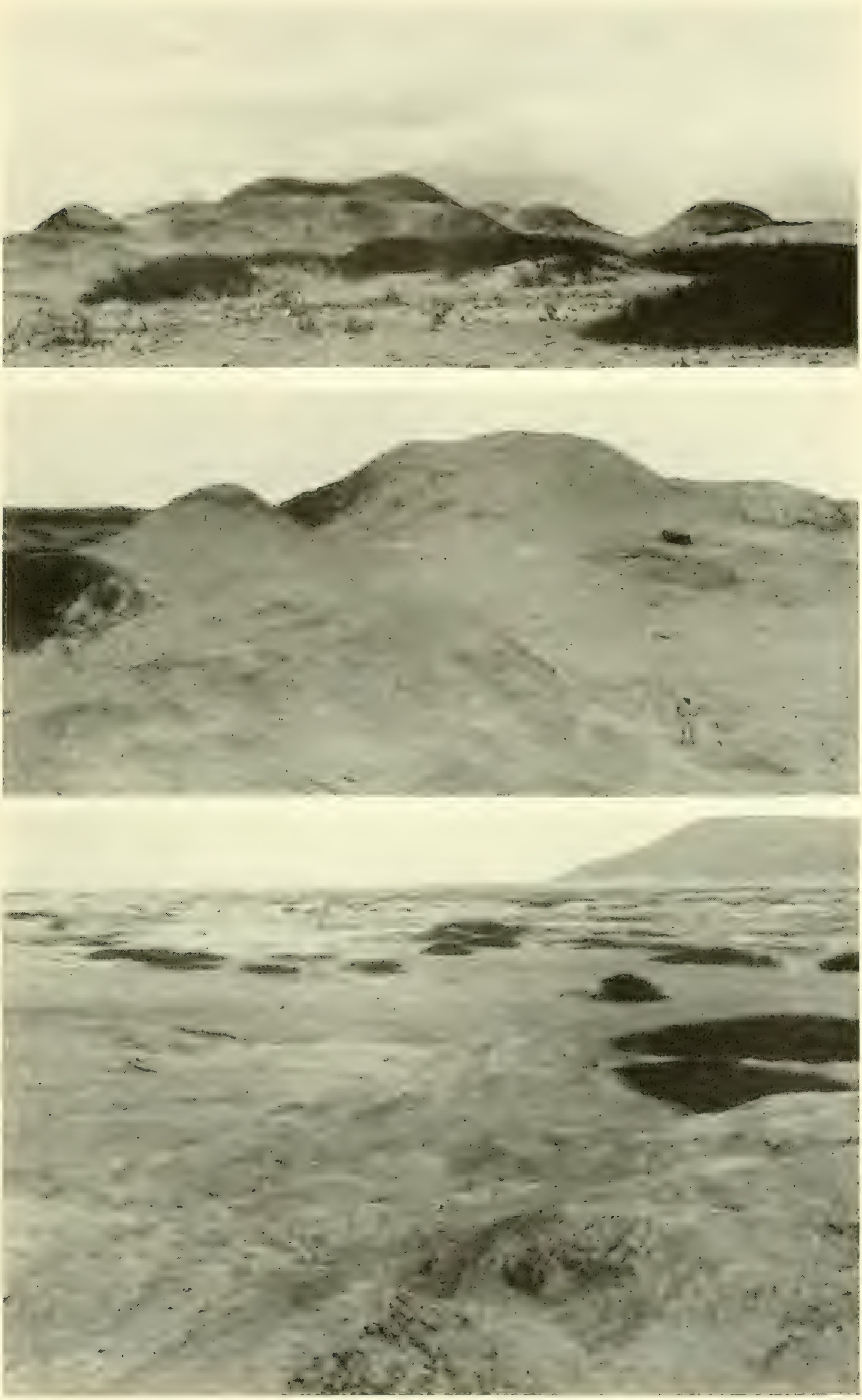
GALLINAZO PERIOD MOUNDS AND MIDDENS

Top, left: The Dwelling-Construction Mound, V–257. *Top, right:* Midden area V–278. *Second row, left:* Earth-Refuse and Dwelling-Construction Mounds V–248 to V–250. *Second row, right:* Largest adobe Pyramid Mound at V–239, with modern shrine on summit. *Third row, left:* V–251, a typical Earth-Refuse Mound of the northwest valley margin. *Third row, right:* Adobe pyramid V–169. *Bottom, left:* Excavation in Earth-Refuse Mound V–251. *Bottom, right:* Larger adobe Pyramid Mound at V–167.



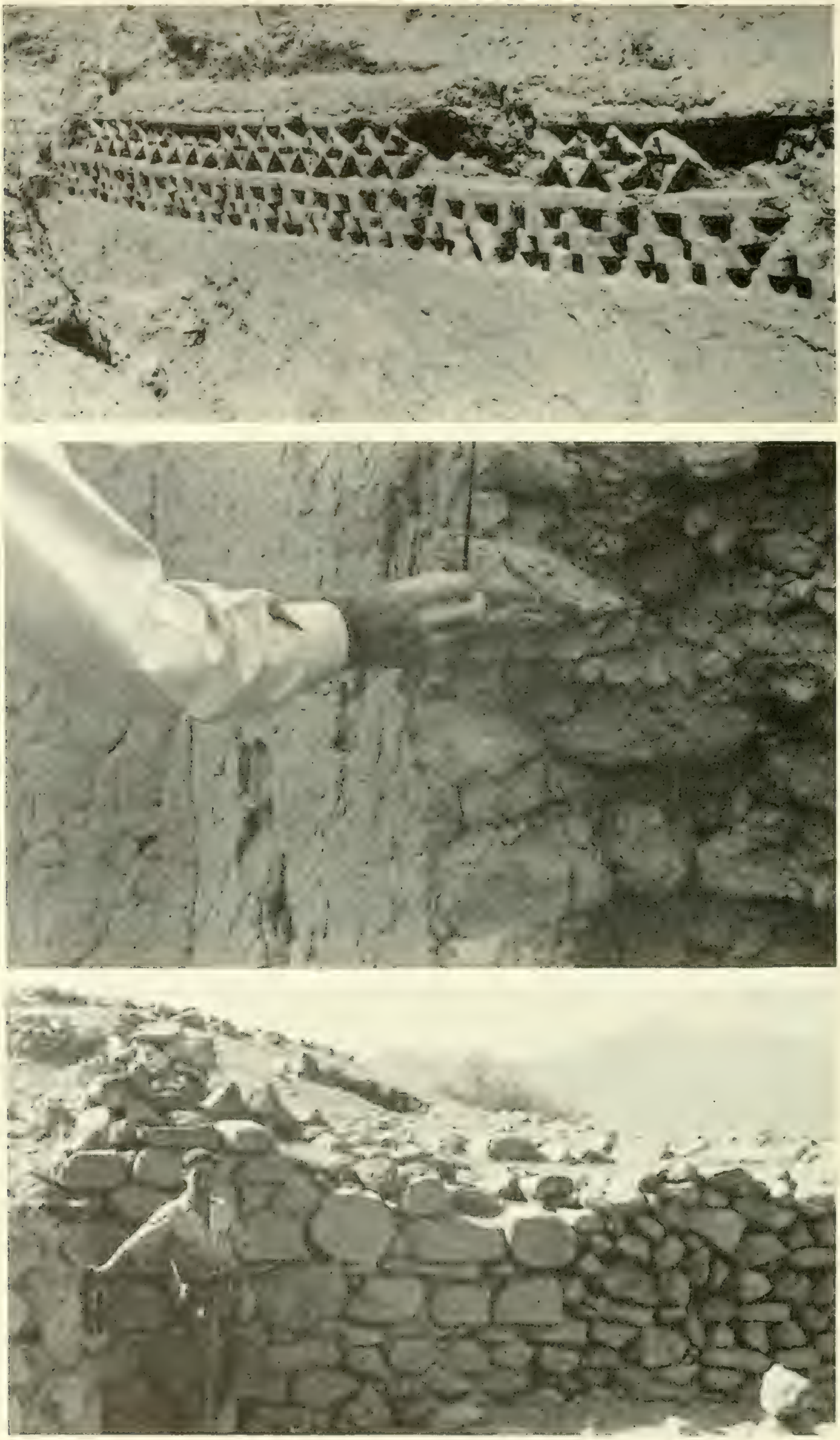
Adobe Pyramid Mounds of the Gallinazo Period

Top: V–275 near river in Lower Virú-North. *Center:* Largest mound in V–175 group. *Bottom:* Close-up of cane-marked rectangular adobe from V–175.



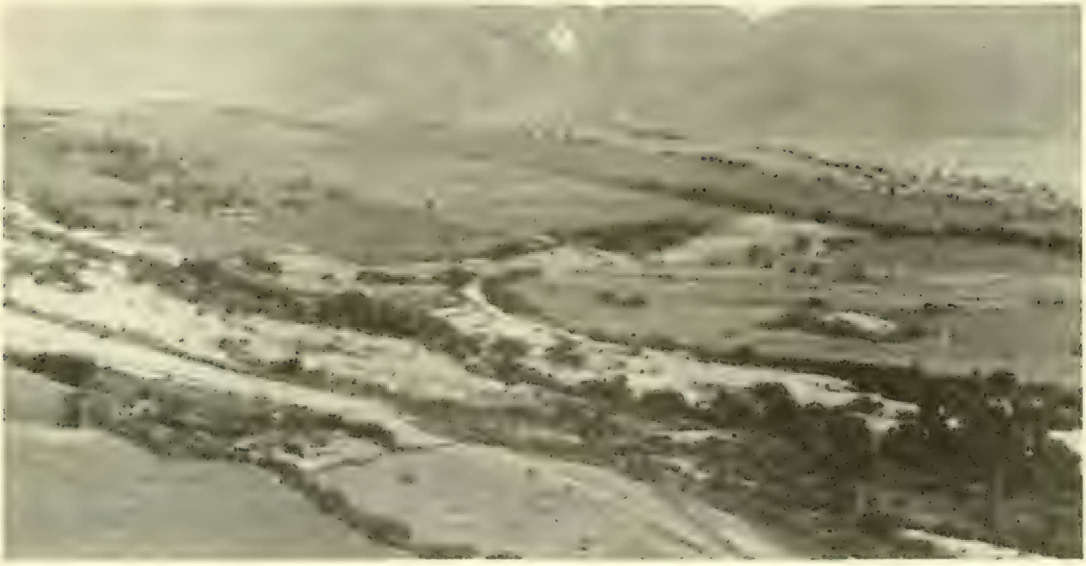
HUACA GALLINAZO (V–59)

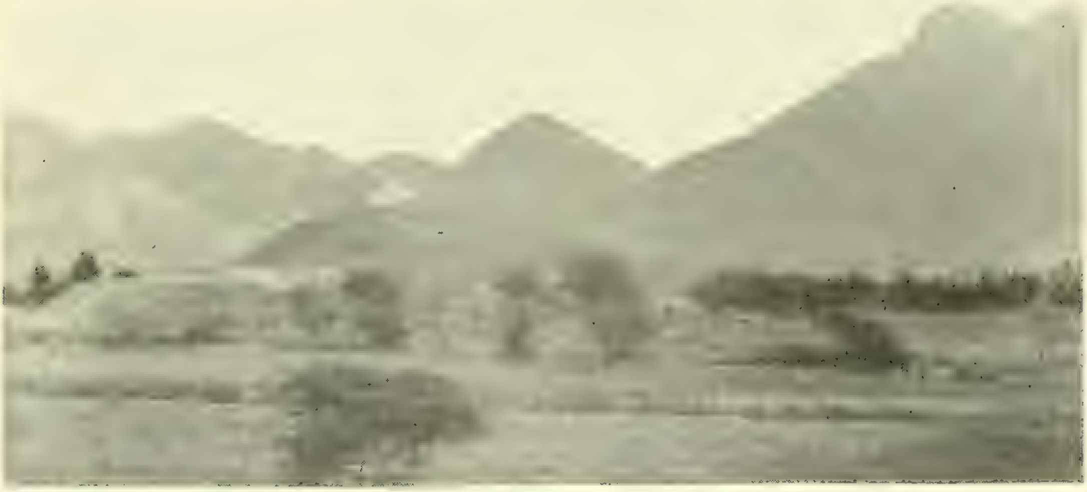
Top: View from south side. *Center:* View from north. *Bottom:* Looking southwest across dune country from V–59 summit. (Top photo courtesy Strong and Evans.)



GALLINAZO PERIOD WALL CONSTRUCTION

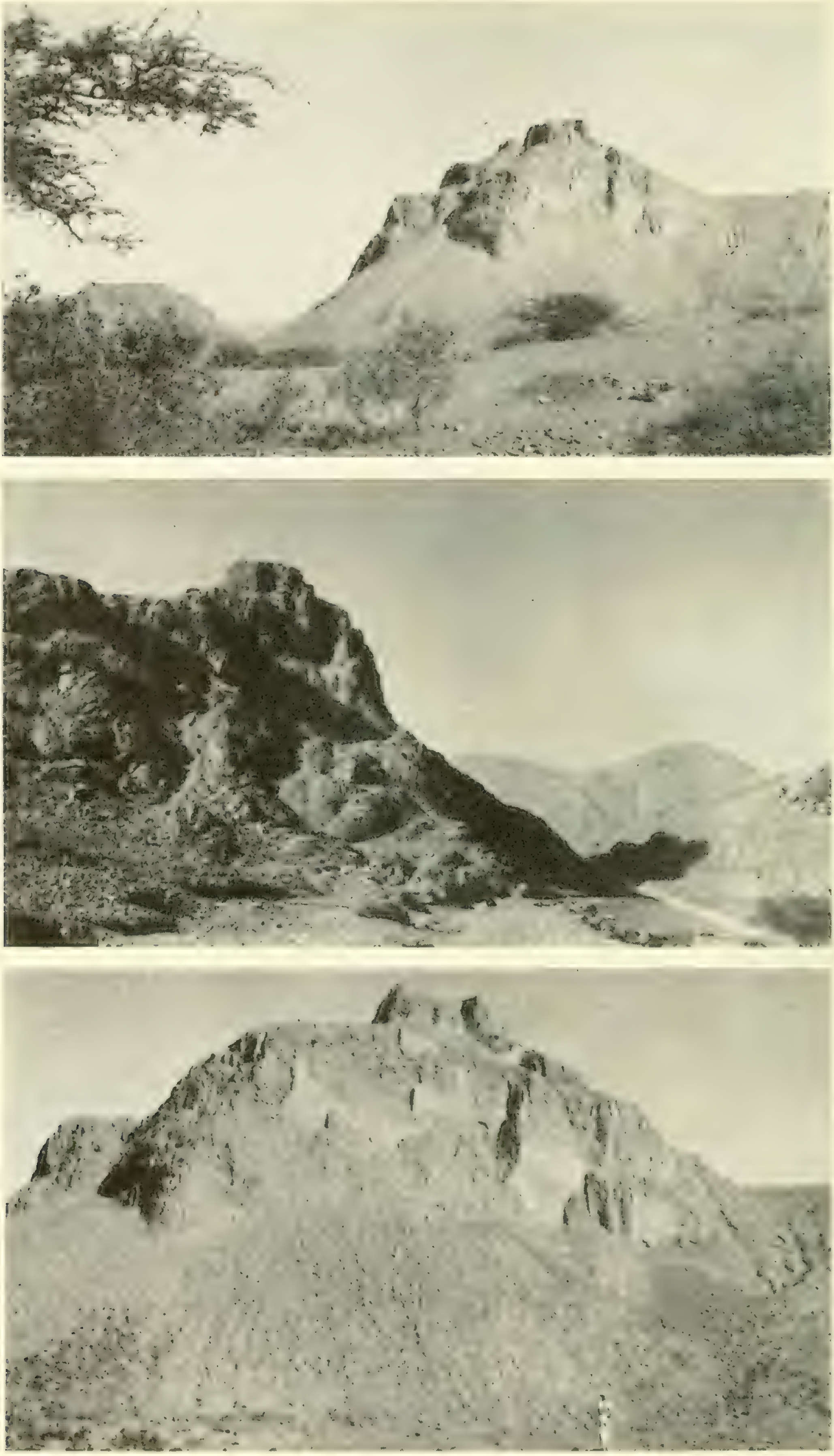
Top: Adobe mosaic at V–152. *Center:* Plastered wall of wedge-shaped adobes at V–131. *Bottom:* Stone retaining wall at foot of V–77 (note tendency to alternate large stones on edge with smaller stones placed flat). (Top photo courtesy Evans.)





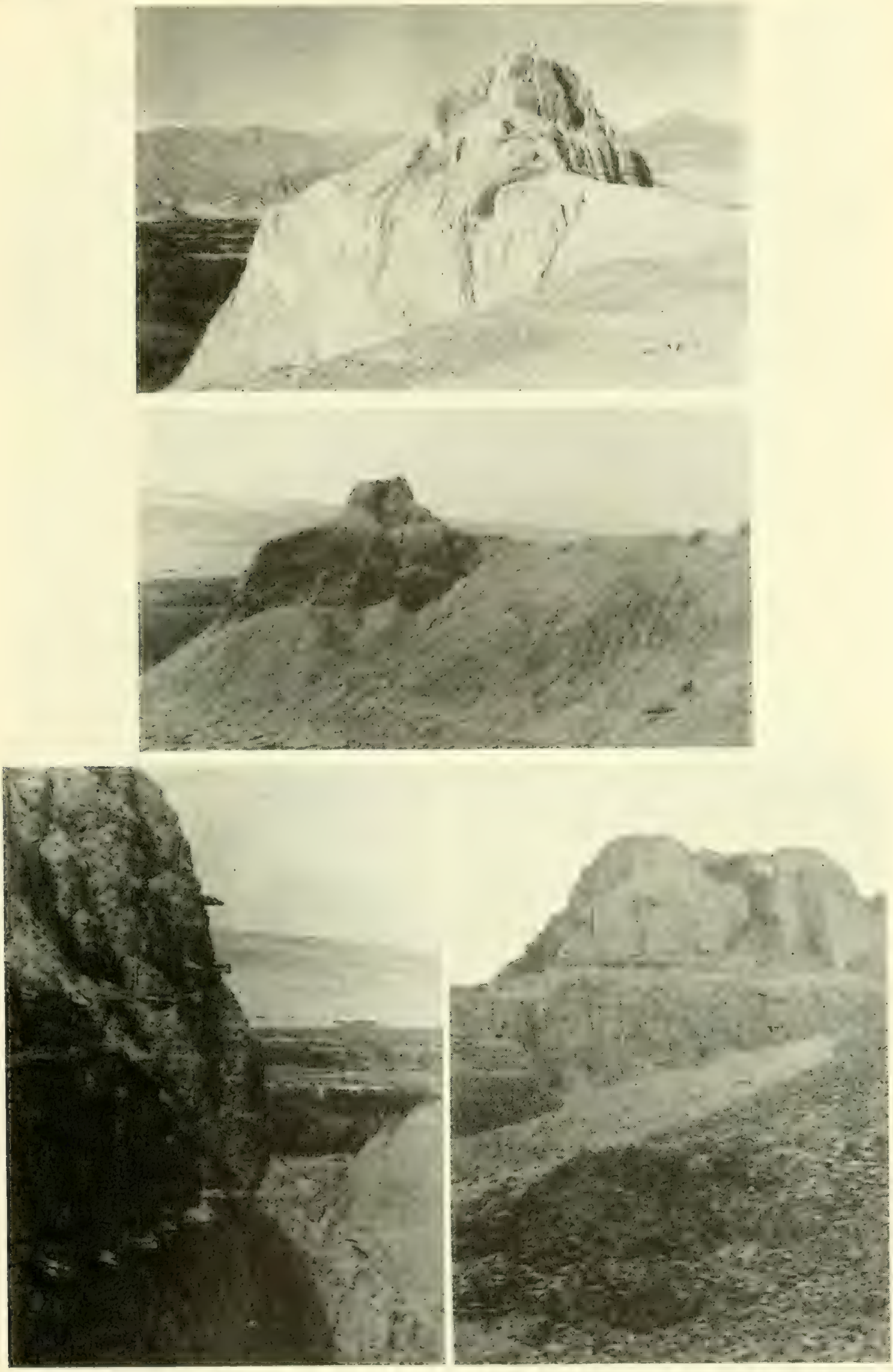
THE SAN JUAN MOUND (V-77)

Top: V-77 (larger mound) and V-103 (smaller mound) as seen from Cerro Sarraque. *Center:* The V-77 Pyramid Mound-Dwelling-Construction Complex from the northeast. *Bottom:* The second or lower platform on the southeast side of V-77.



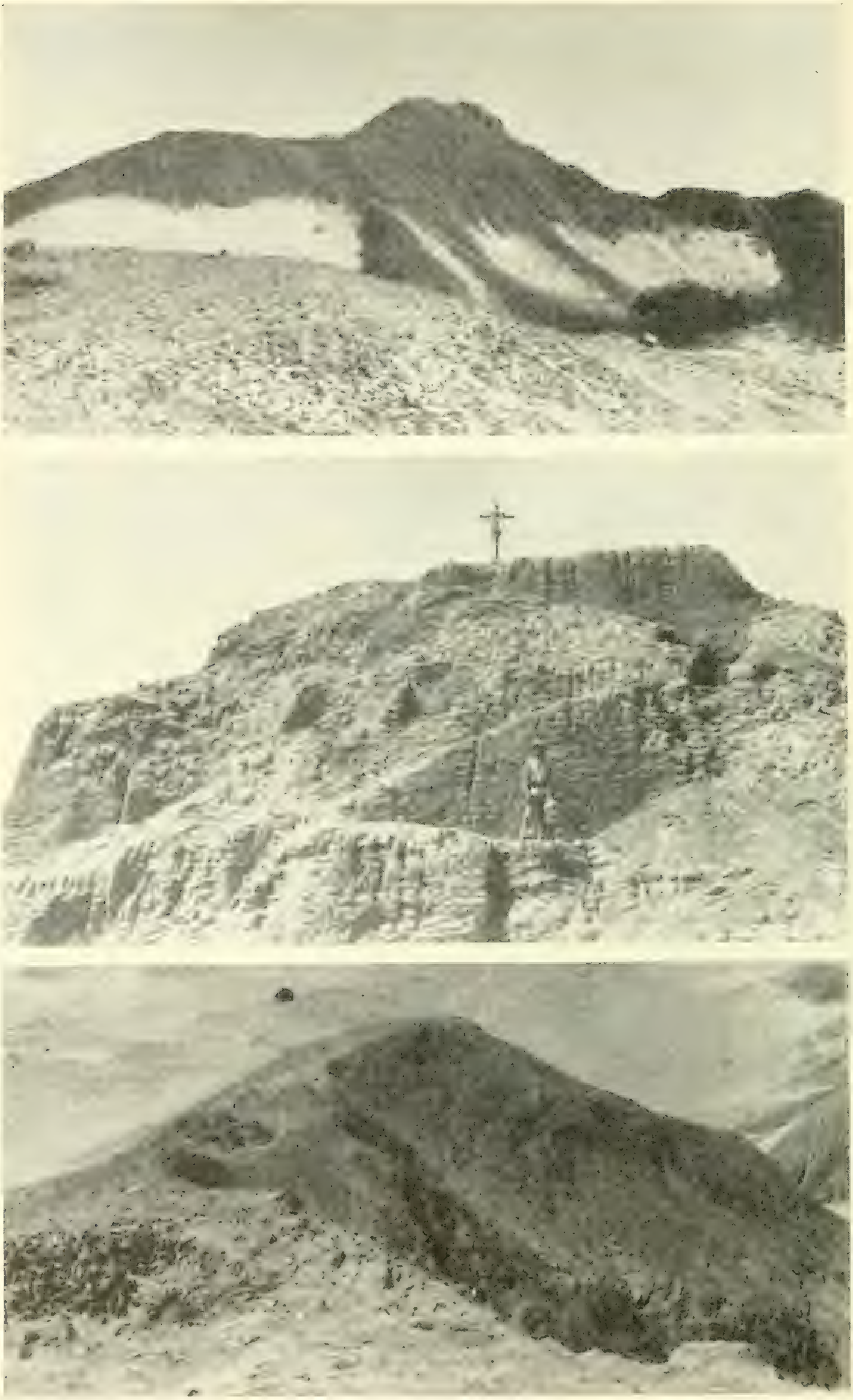
THE CASTILLO DE TOMAVAL (V–51)

Top: From the north. *Center:* From the south. *Bottom:* At foot of north side. (All photos courtesy Strong and Evans.)



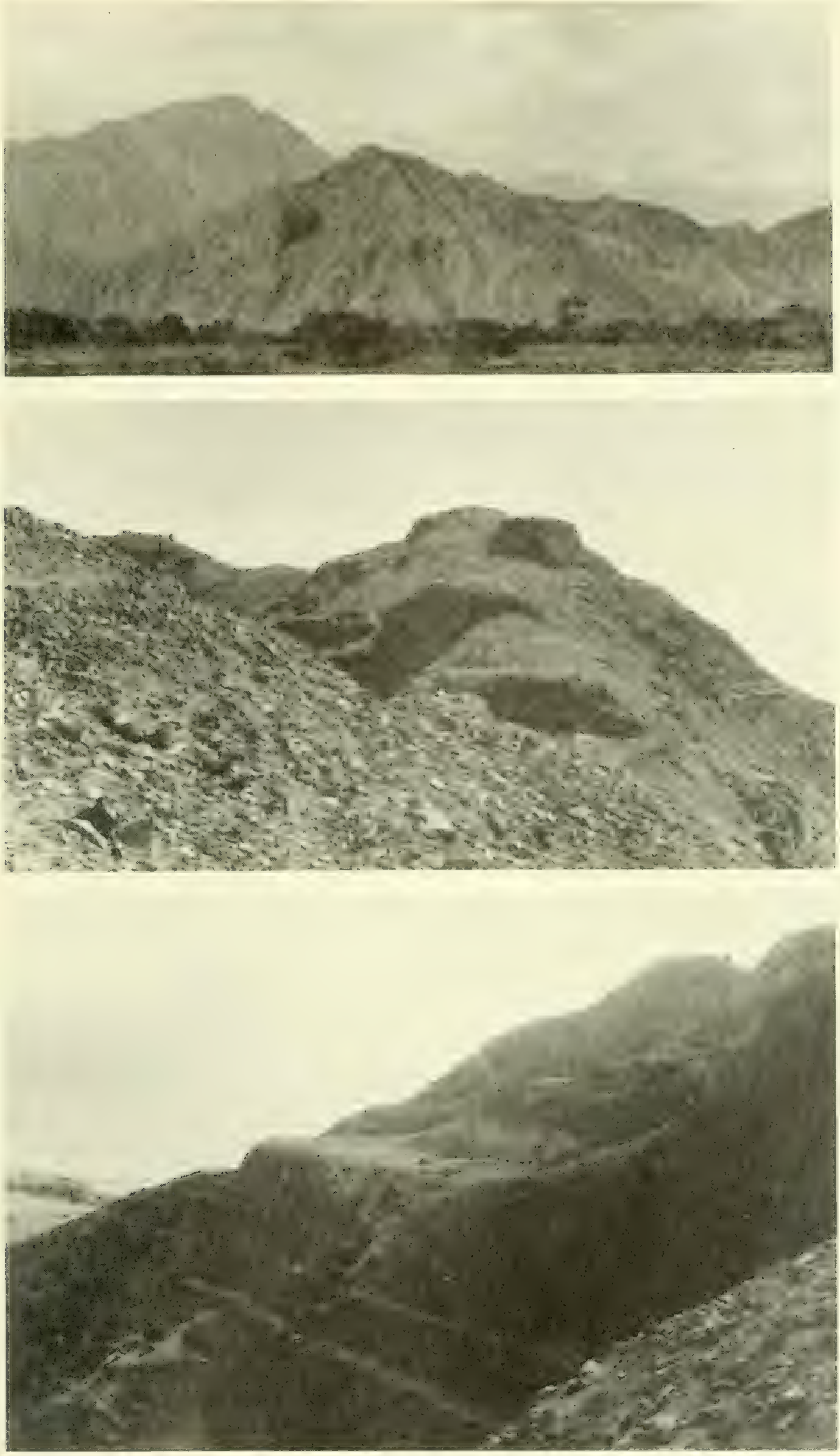
THE CASTILLO DE TOMAVAL (V–51)

Top: The upper structure of the pyramid taken from the ridge. *Center:* The castillo from the northwest showing ridge coming in from right. *Bottom, left:* Algarroba log binders protruding from pyramid face on southwest side. *Bottom, right:* Southeast side from below, showing stone wall facings and columnar type structure in the adobes. (All photos courtesy Strong and Evans.)



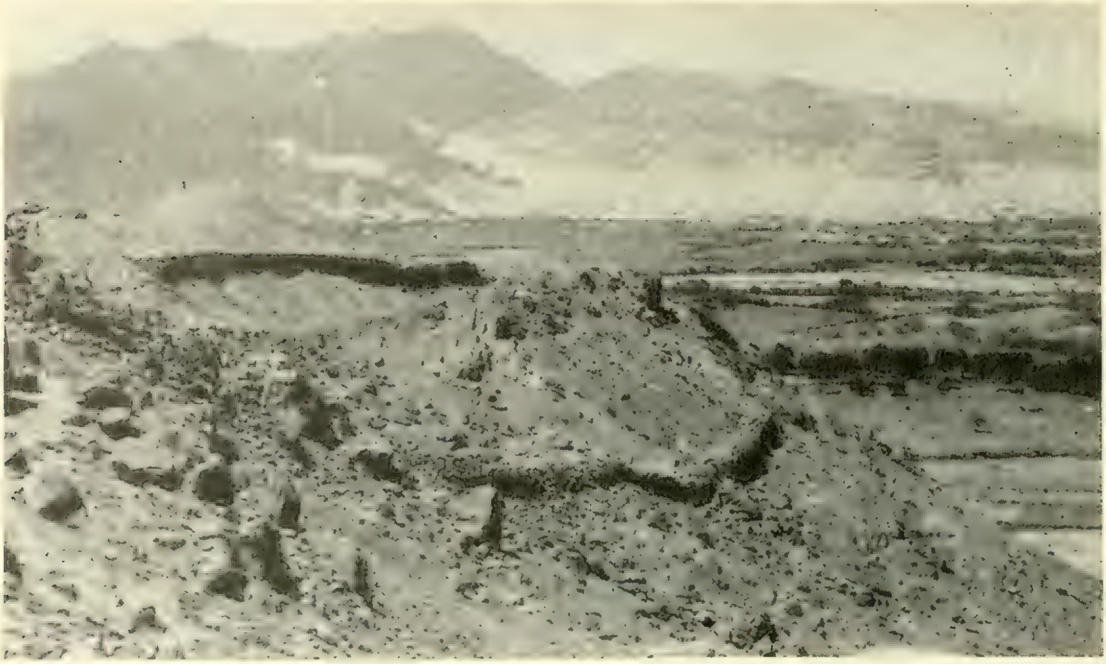
CASTILLO DE NAPO (V-68)

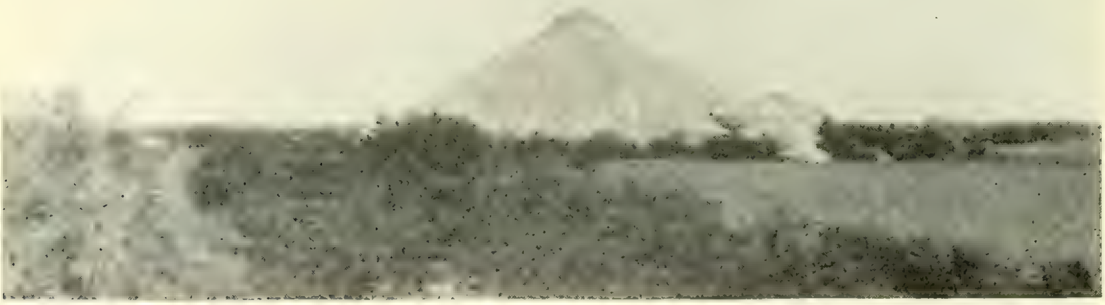
Top: Napo hill from up Valley. *Center:* Zigzag ramp approach to summit on west face of pyramid. *Bottom:* Flattened or prepared ridge approach to upper structures.

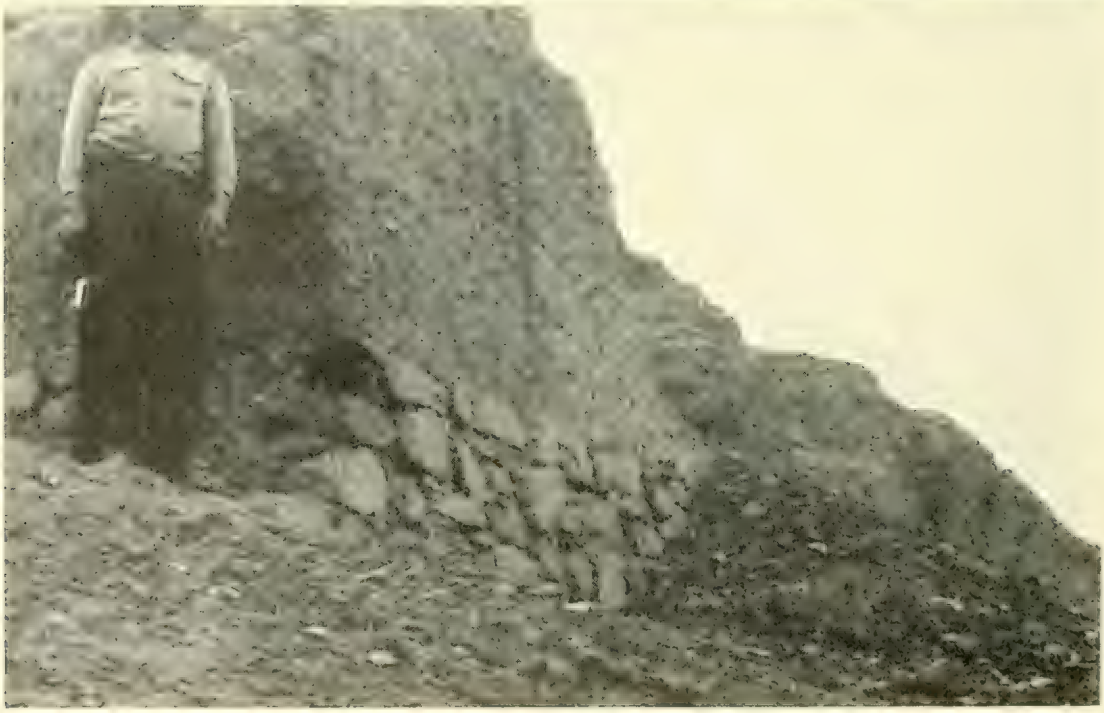


CASTILLO DE SARRAQUE (V–72–73–74)

Top: Sarraque hill from the southwest (the highest point is V–72 while V–73 is a little farther down the crest). *Center:* V–73 adobe platforms from the east. *Bottom:* Wall construction on side of V–73 (stone facings beneath adobe mass). (Bottom photo courtesy Evans.)

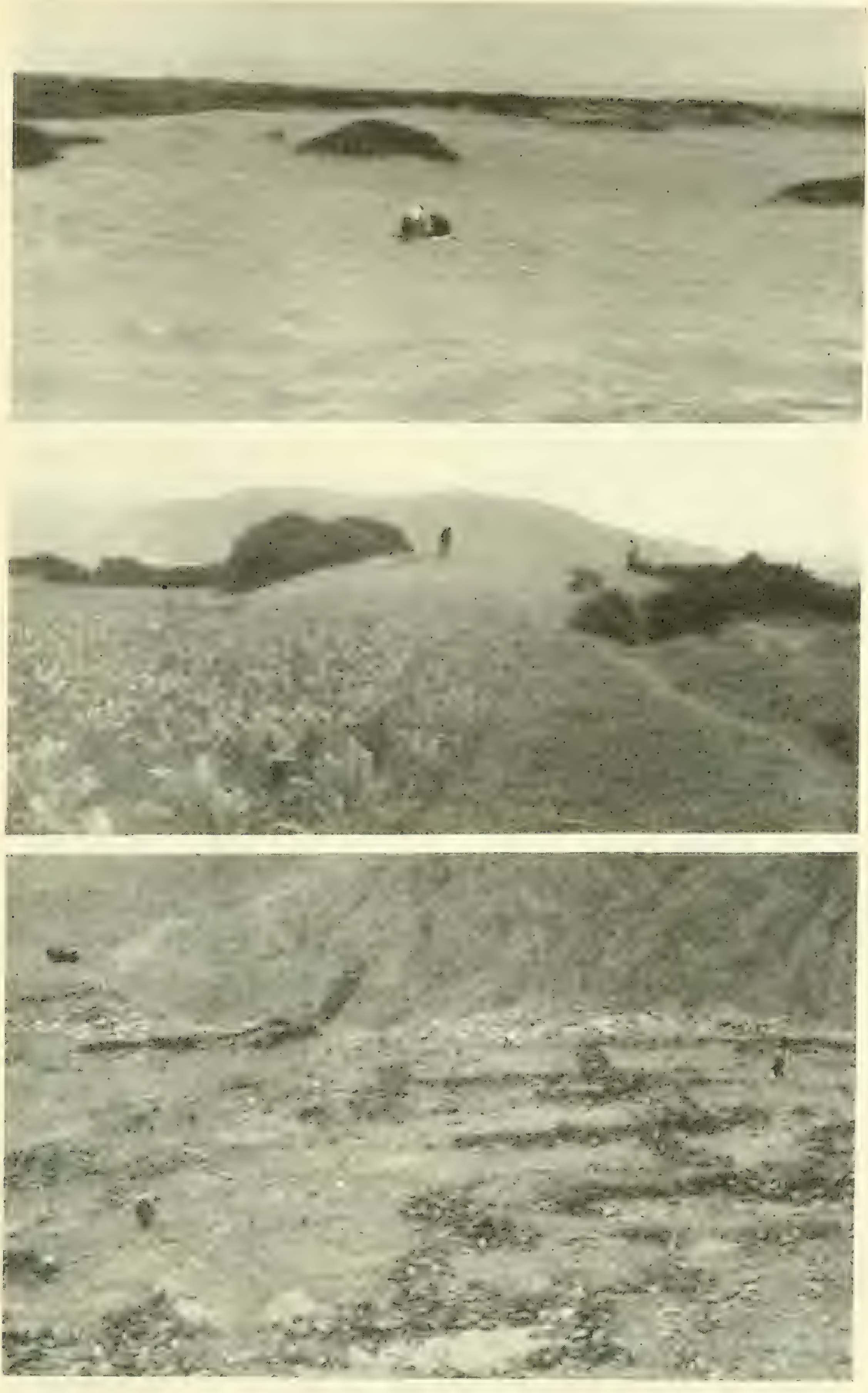






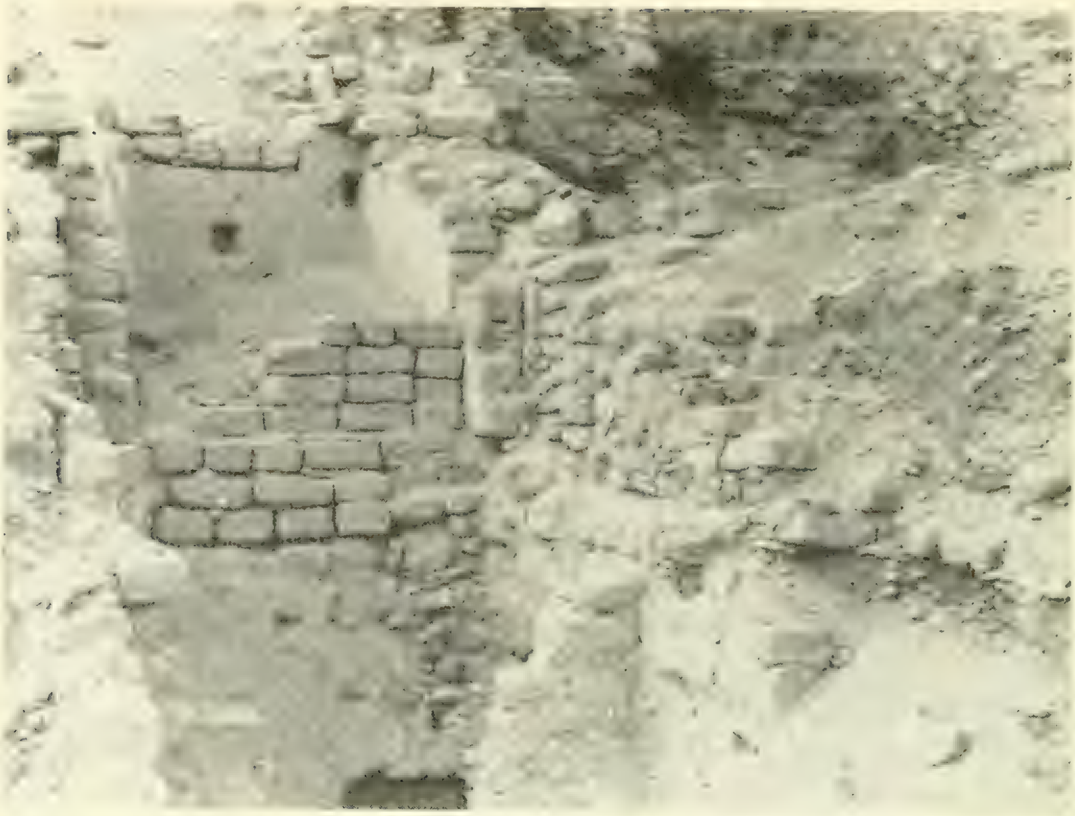
CASTILLOS OF SAN JUAN (V–16) AND VIRÚ VIEJO (V–231)

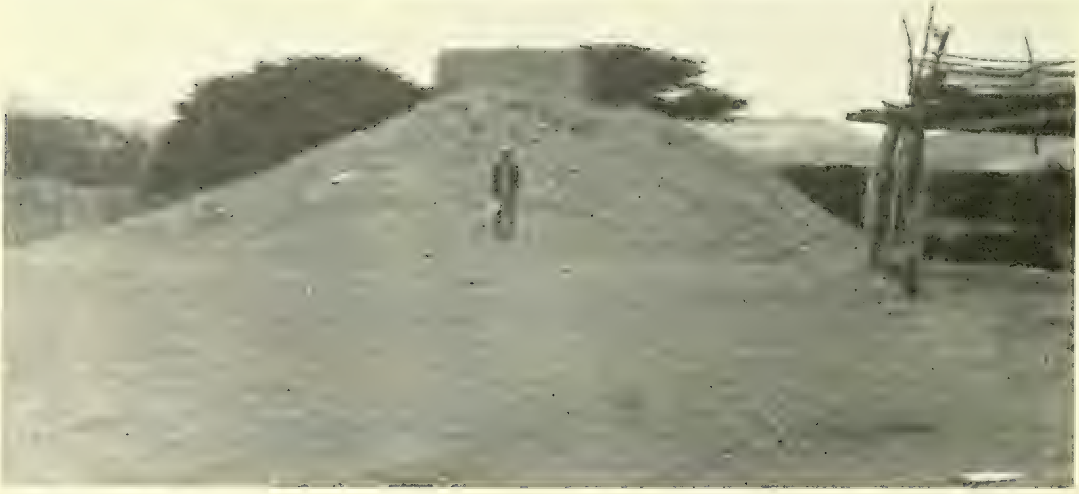
Top: Platforms of V–16 and section of encircling stone wall. *Center:* Virú Viejo hill from the east. *Bottom:* Stone foundation to adobe platform on Virú Viejo. (Top photo courtesy Evans.)

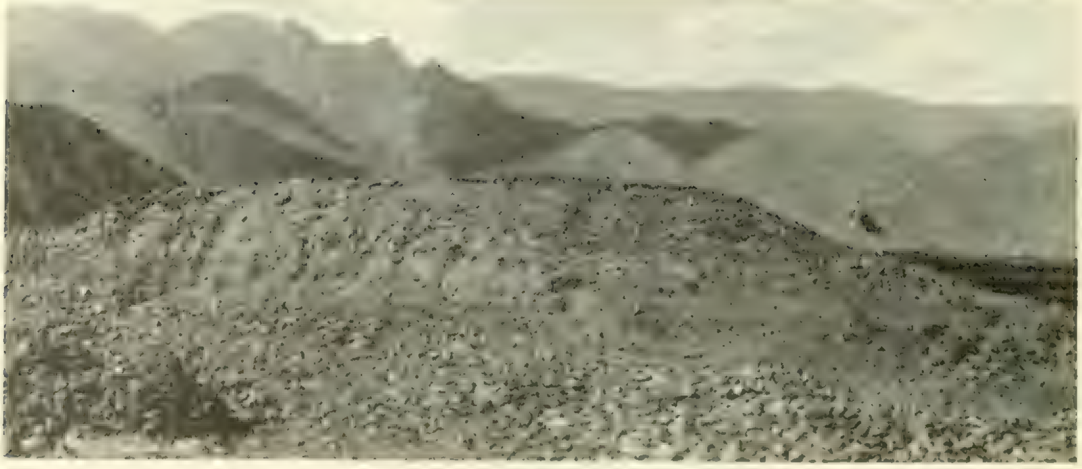


HUANCACO PERIOD SITES

Top: Cemetery V–139 in beach country. *Center:* Dwelling-Construction Mound V–249. *Bottom:* Dwelling site V–192 from above (note defense wall blocking off entrance to quebrada at upper left).

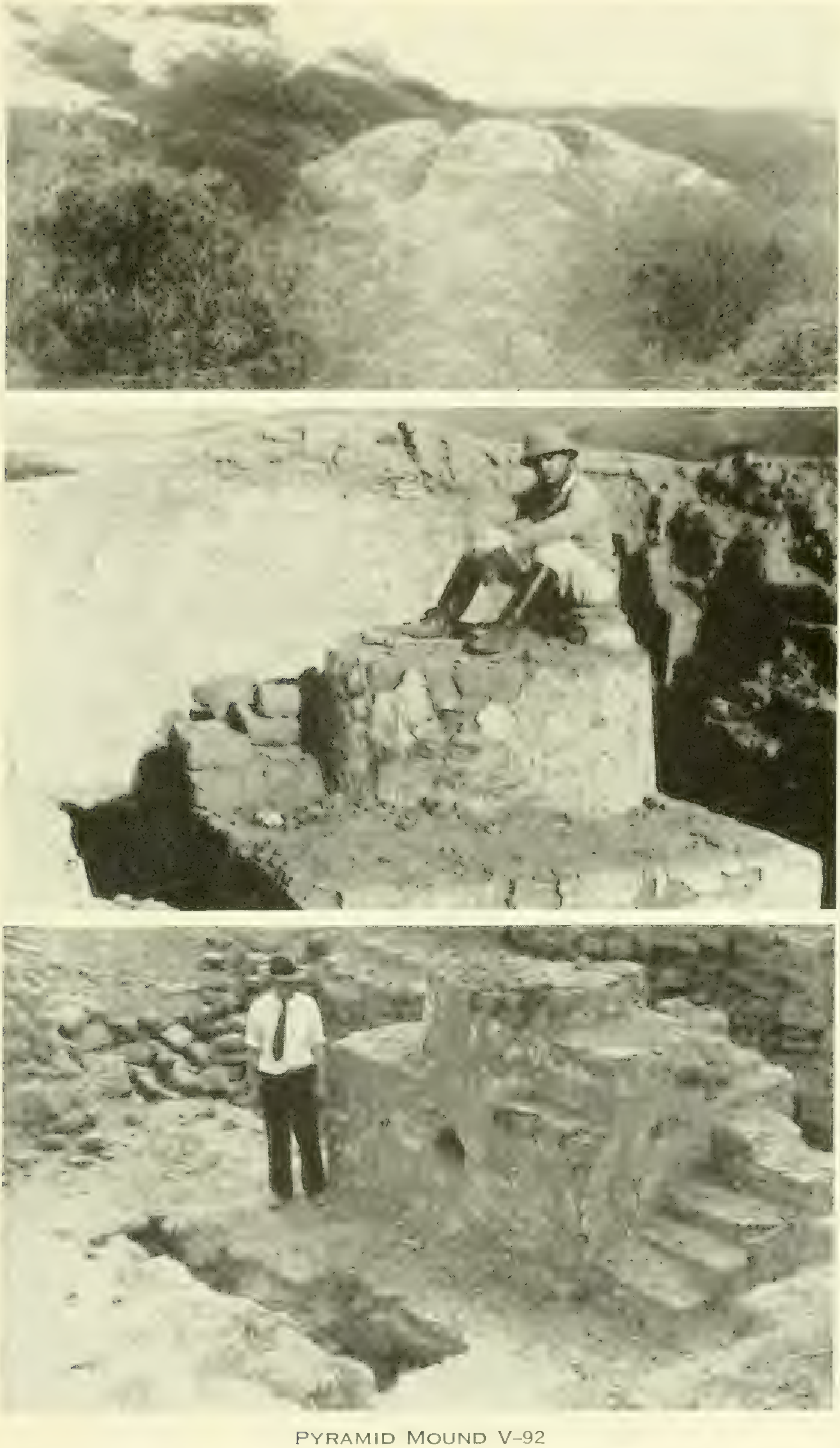






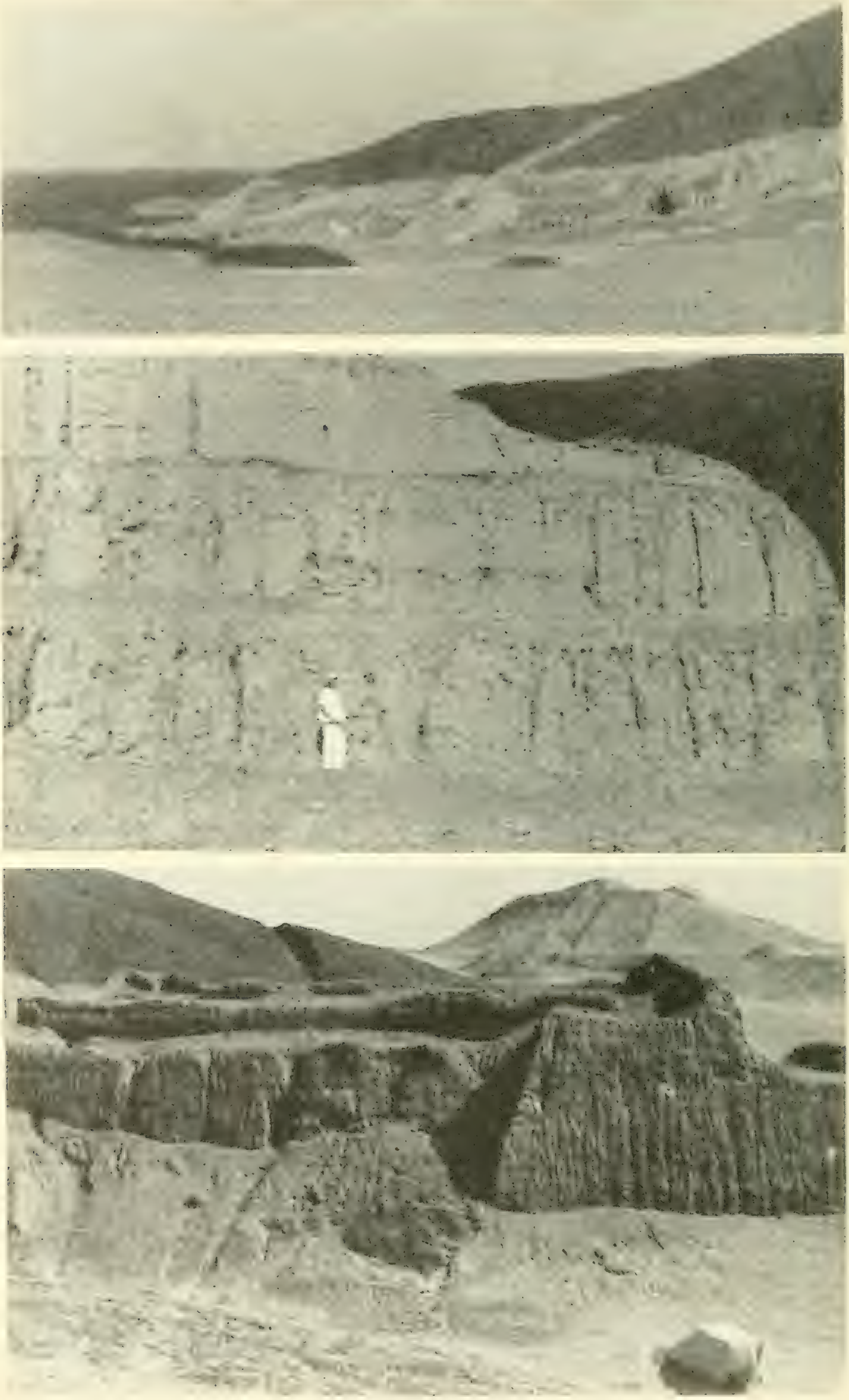
HUANCACO PERIOD SITES

Top: Adobe-walled conjoined rooms below summit of V–67 castillo (Santa Clara). *Center:* Mound at the Pyramid-Dwelling-Construction Complex site V–166. *Bottom:* Exposed earth and rock cross section of the V–149 pyramid.



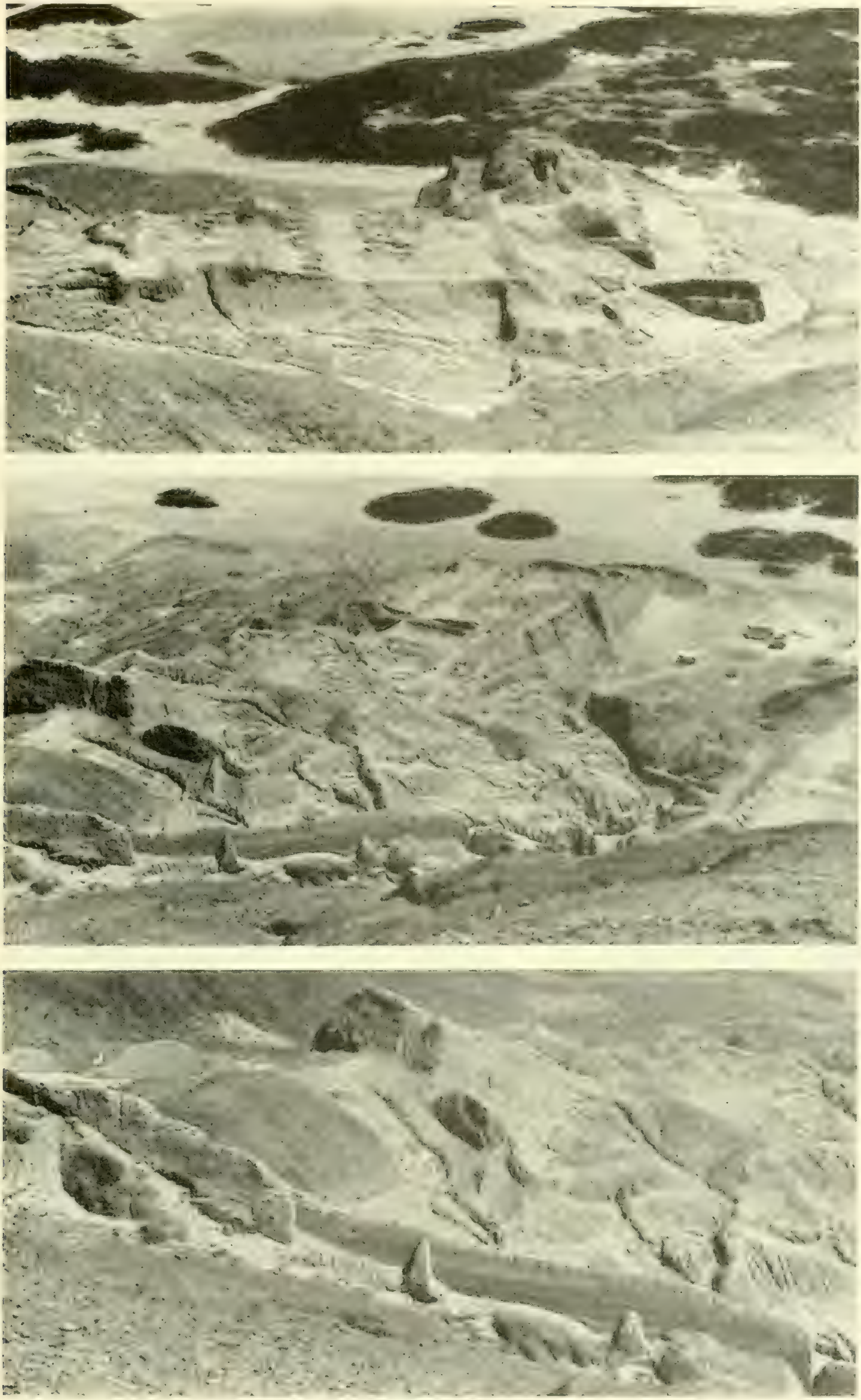
PYRAMID MOUND V–92

Top: Mound from the south. *Center:* Pedestallike throne of plastered adobes revealed by old excavations. *Bottom:* Another view of throne. (Center photo courtesy Luis Arrese.)



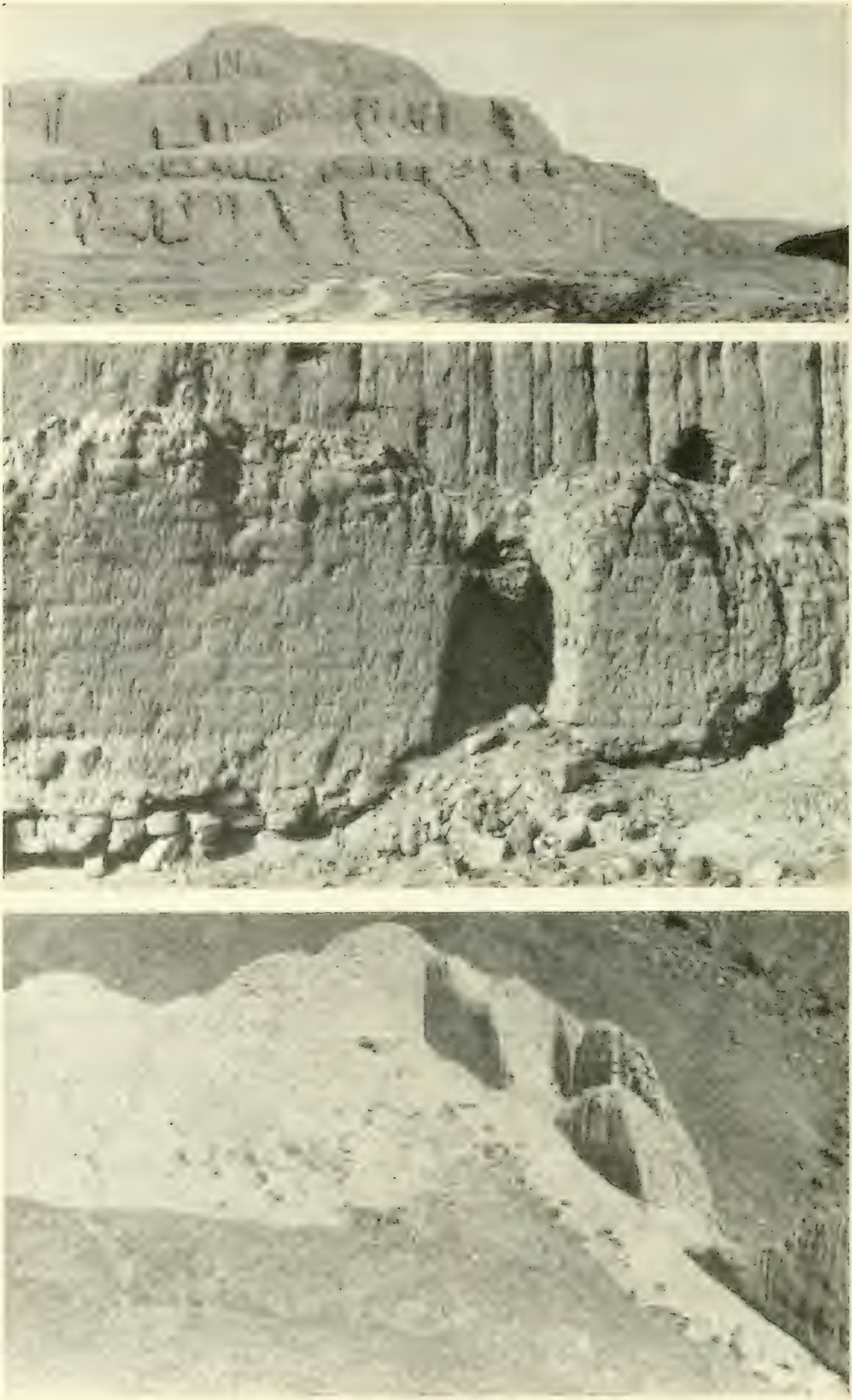
HUANCACO SITE (V–88–89)

Top: View from the west. *Center:* The terraced front of V–88. *Bottom:* V–88 platforms viewed from the pyramid of V–89 to the northeast.



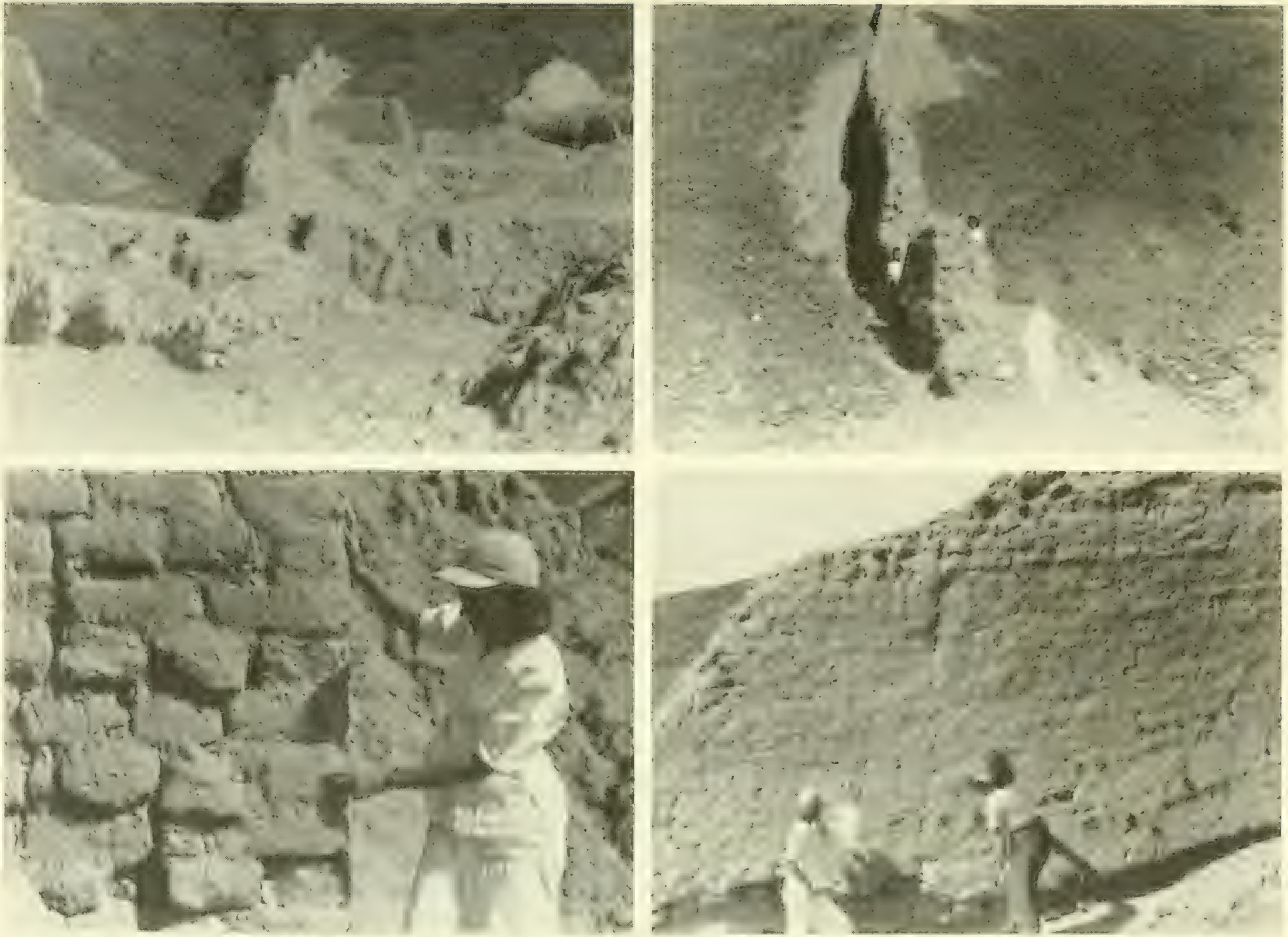
HUANCACO VIEWED FROM HILLS ABOVE

Top: The pyramid V–89 and connected platforms. *Center:* The courts and corridors on the V–88 platform series. *Bottom:* Upper portion of V–88 (note wall with pilasterlike abutments).



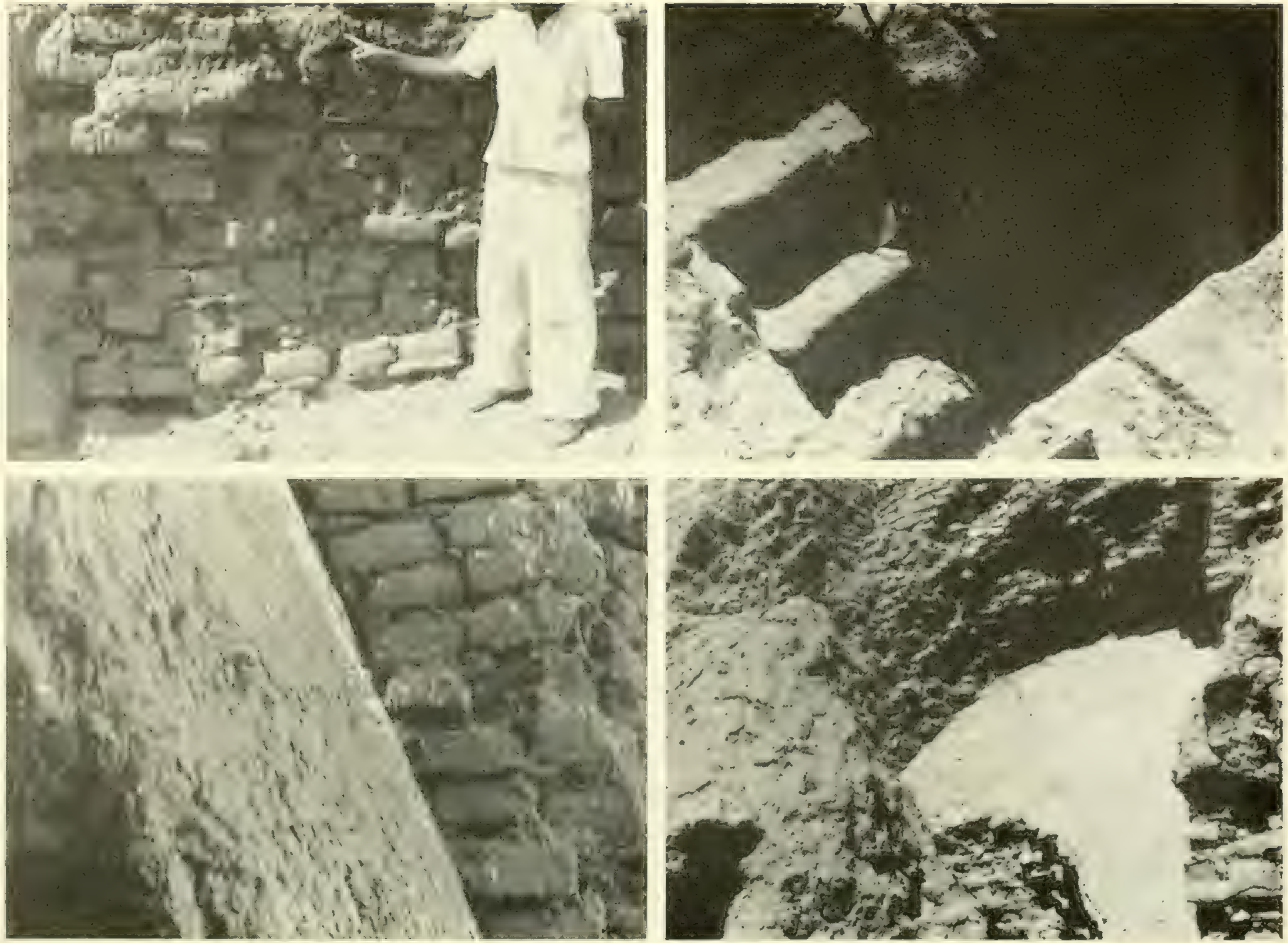
HUANCACO SITE FEATURES

Top: V–89 pyramid from northeast. *Center:* Doorway in south outer wall of V–88 (opens into corridor). *Bottom:* Southwest or upper corner of V–88 with double-wall or corridor.



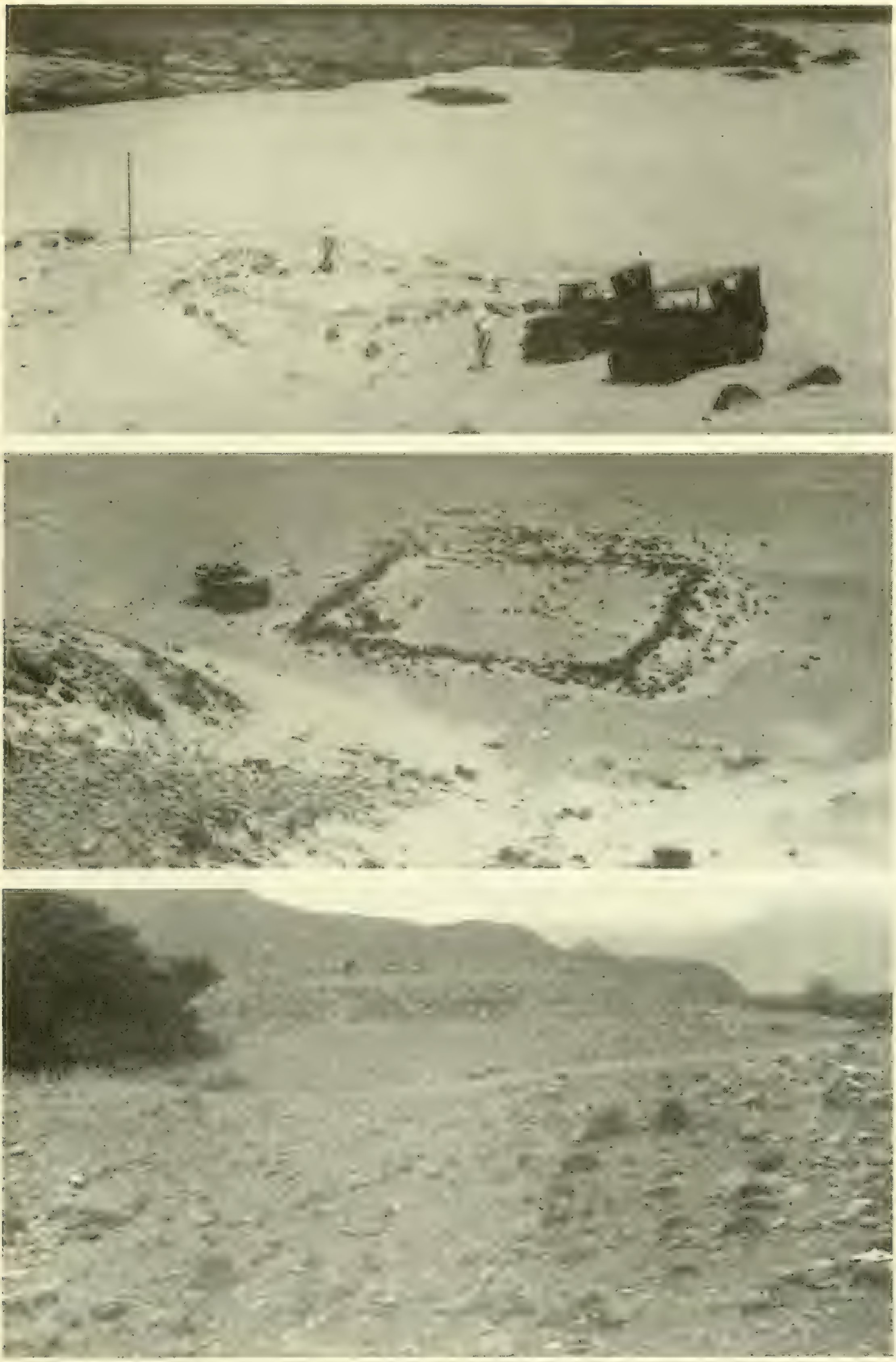
WALLS AT HUANCACO

Top, left: Platforms in foreground and walls extending up rocky slope. *Top, right:* Adobe wall running up hill slope behind site. *Bottom, left:* Method of tying-in adobe corners. *Bottom, right:* Cleavage line in adobe wall.



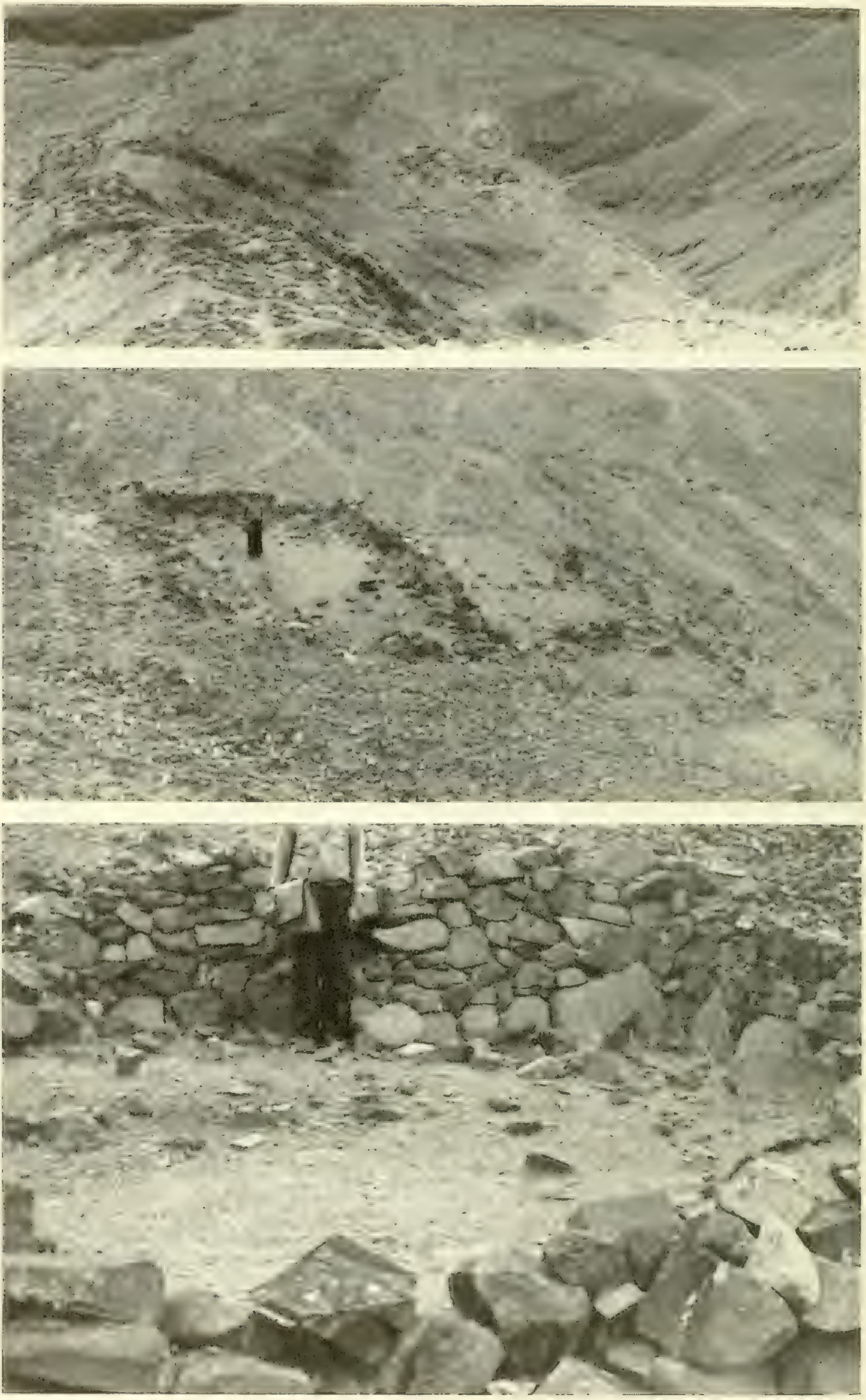
HUANCACO SITE STRUCTURAL FEATURES

Top, left: Interior crude construction of one of high defense walls back of V–89. *Top, right:* Steps descending from Room 1, cleared by 1946 excavation. *Bottom, left and right:* Cleavage planes in adobe construction in section joining V–88 and V–89.



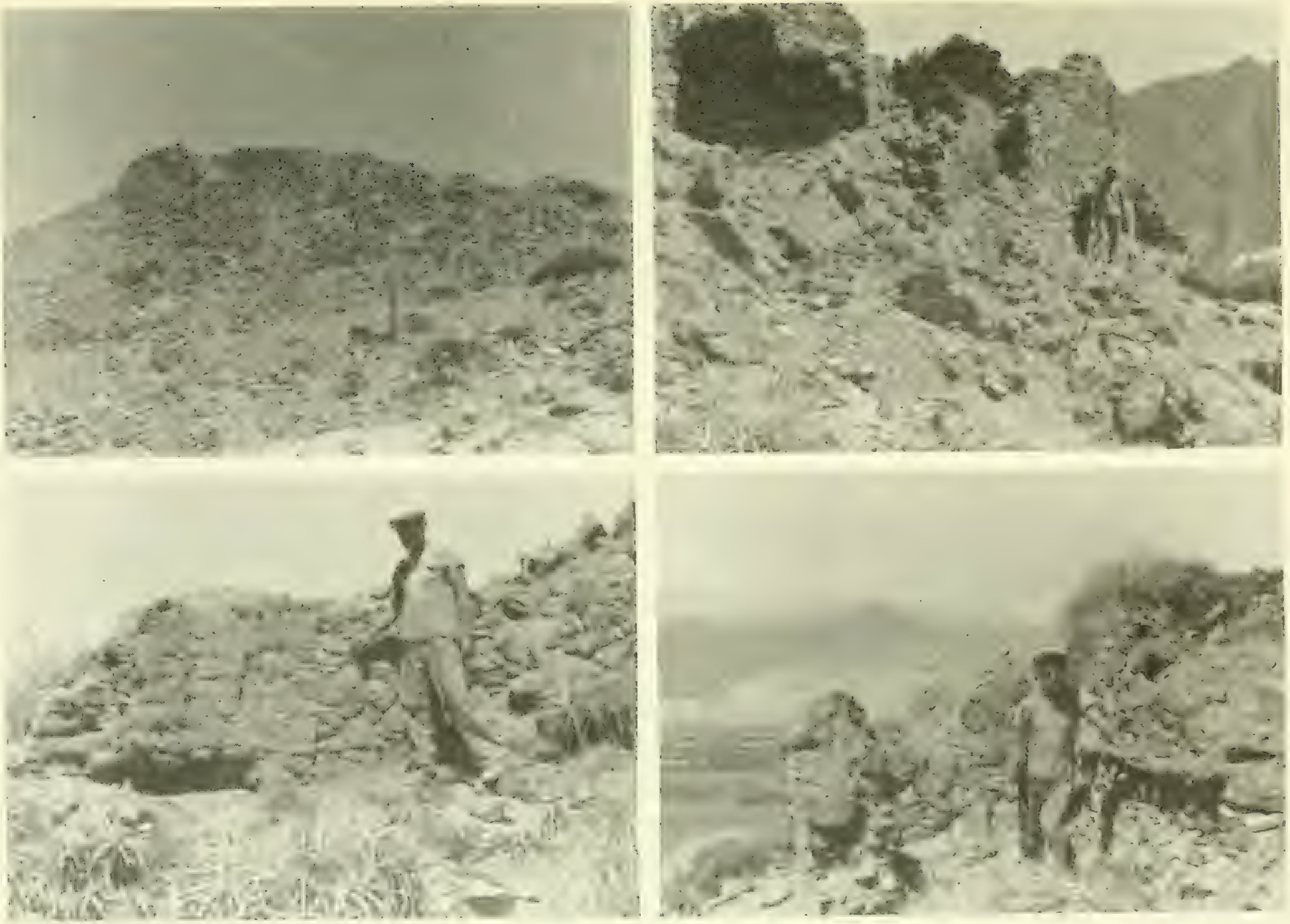
TOMAVAL PERIOD SITES

Top: Overlooking stone foundations of V–7. *Center:* V–111. *Bottom:* Rock-covered Pyramid Mound V–37. (Top photo courtesy Evans.)



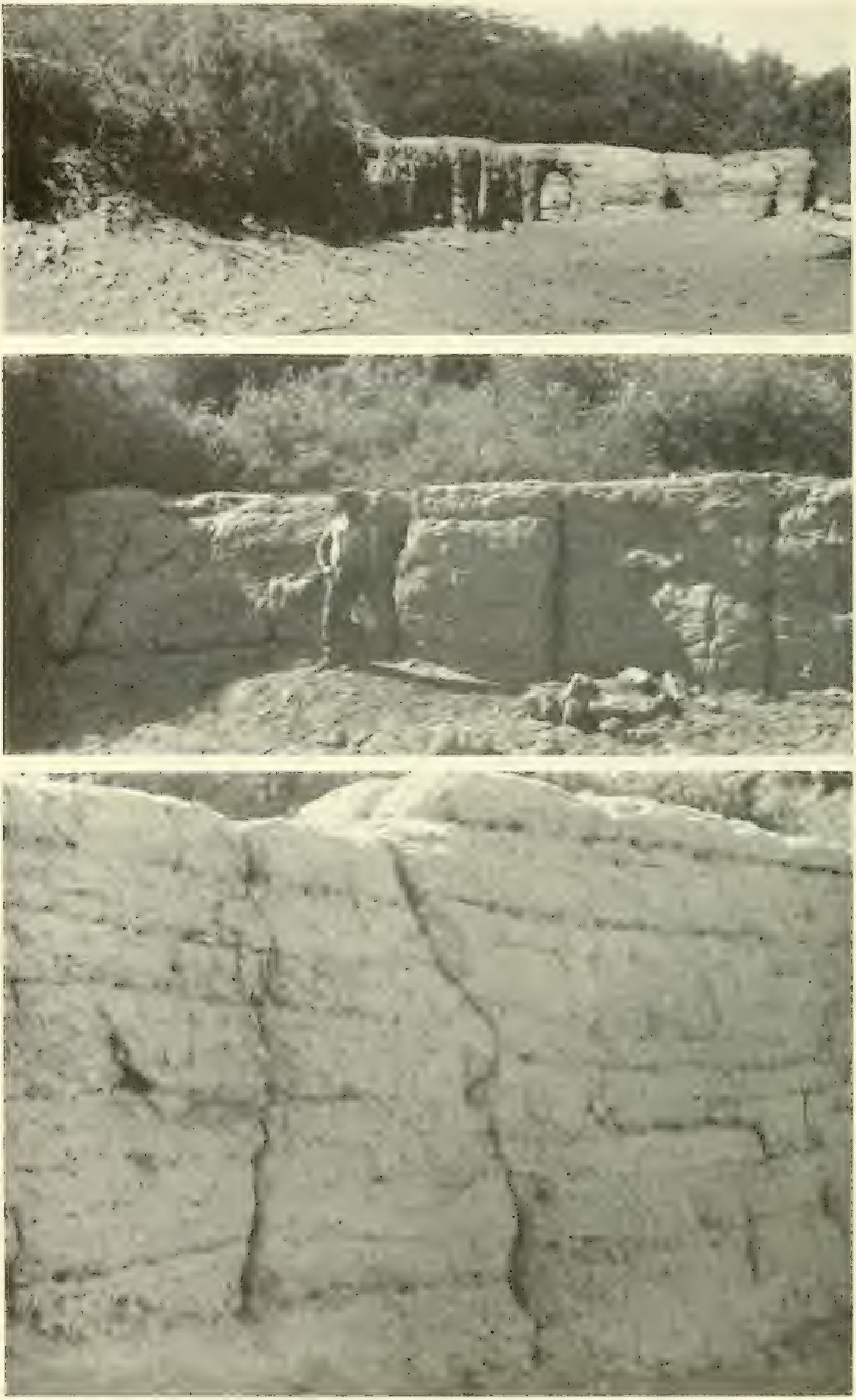
TOMAVAL PERIOD SITES

Top: Agglutinated site V–60 in quebrada at foot of V–61. *Center:* Semi-isolated Large House, V–225. *Bottom:* V–225 close-up.



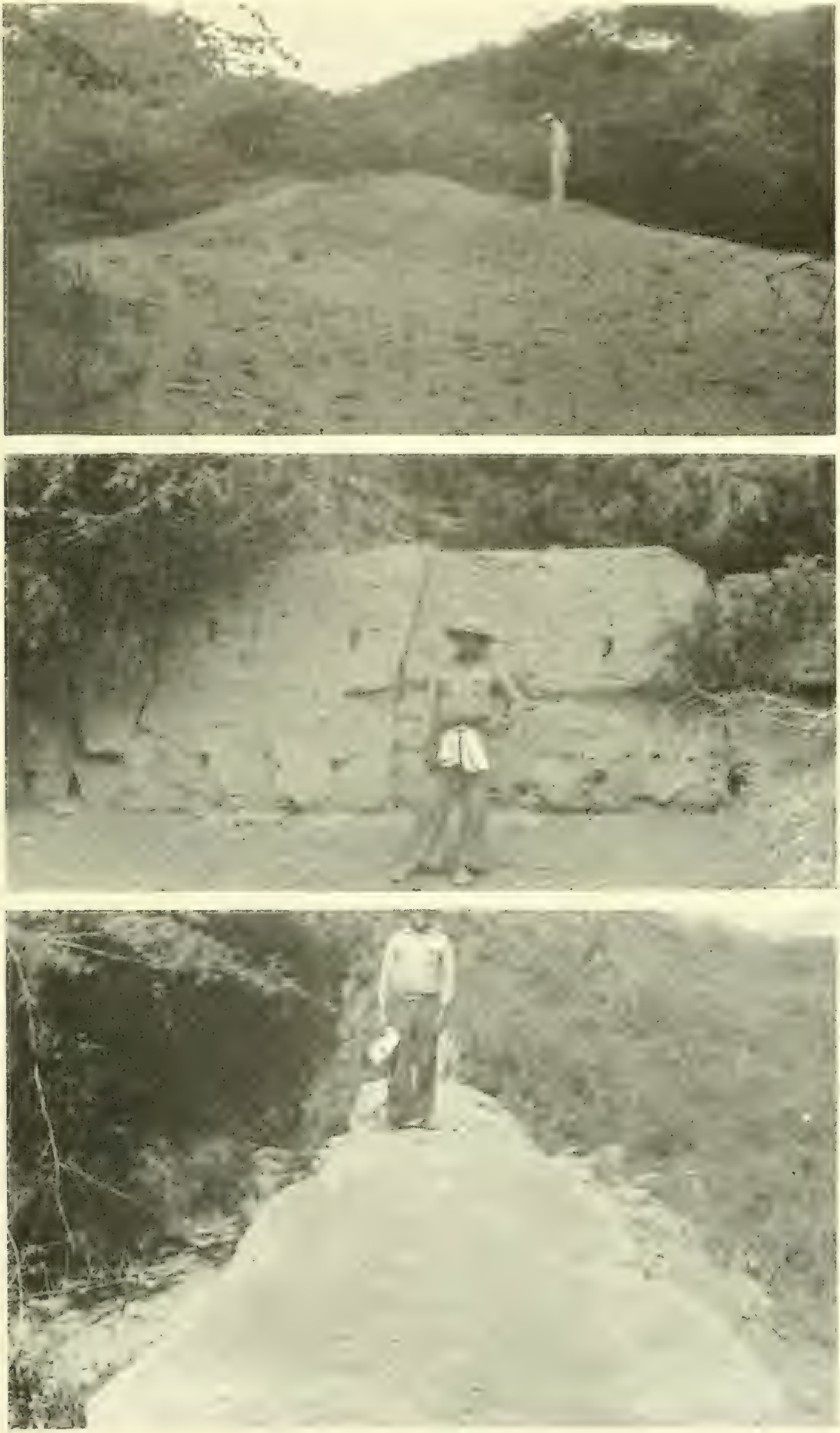
TOMAVAL PERIOD HILLTOP AGGLUTINATED VILLAGE V-61

Top, left: Site viewed from below. *Top, right:* Rock-walled rooms (note small adobe wall section in foreground). *Bottom, left:* Rock and adobe walls conjoined. *Bottom .right:* Rock ledges projecting from wall of room to support upper story.



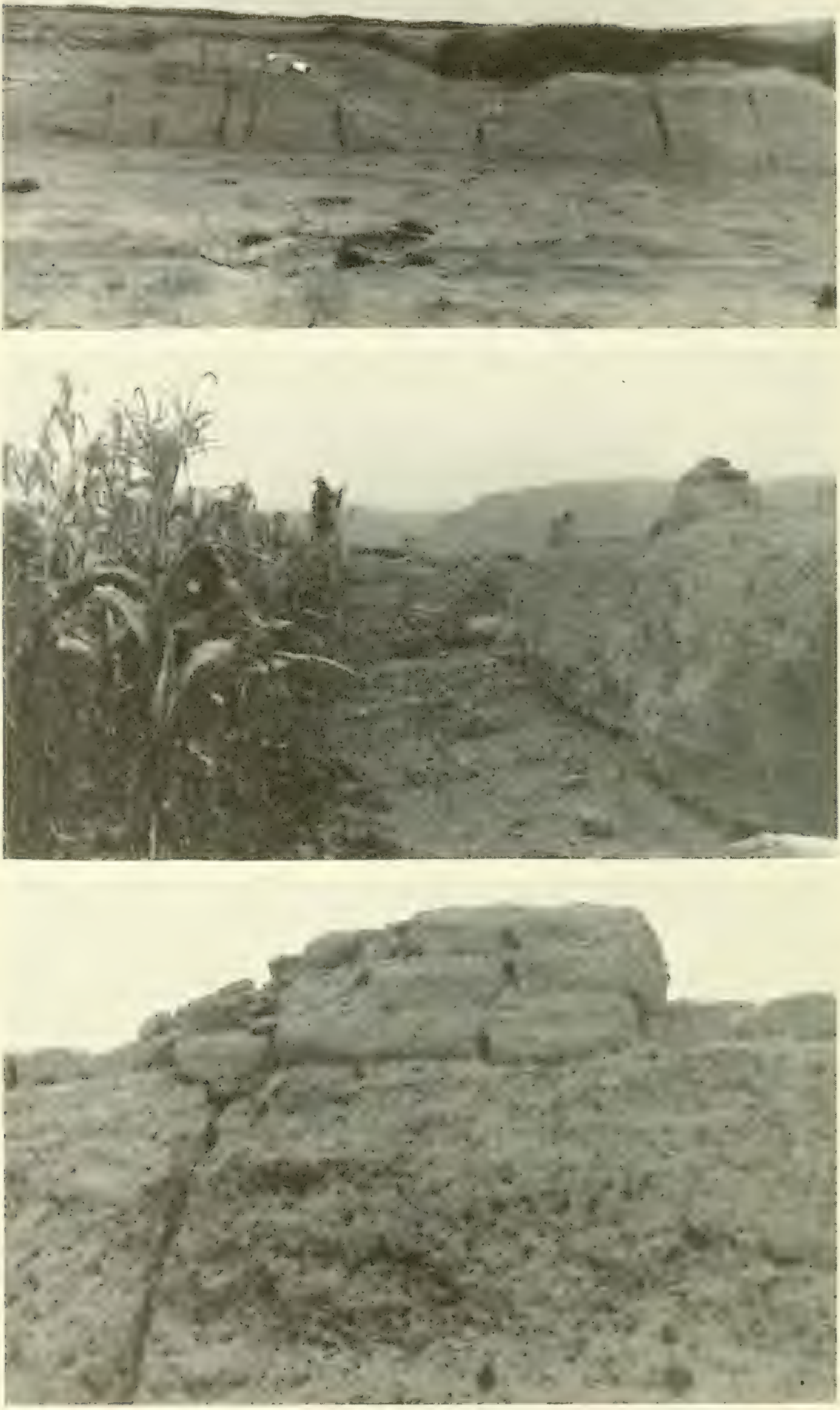
GREAT RECTANGULAR ENCLOSURE COMPOUND, V–171

Top: "Arch" caused by erosion in one of walls. *Center:* Walls (note vertical sections of tapia). *Bottom:* Wall close-up (note horizontal layers and vertical sectioning).



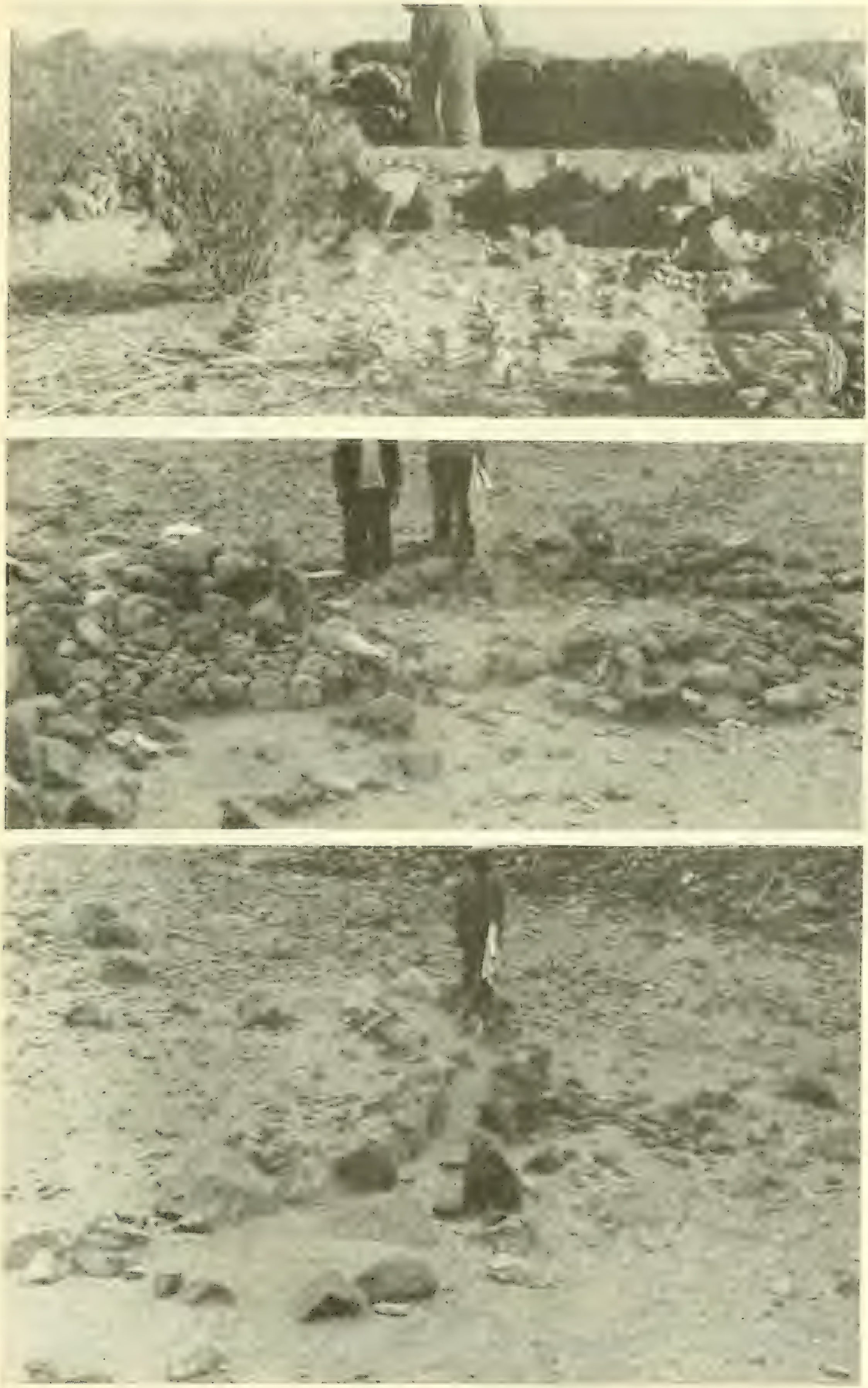
SITE V–171

Top: Refuse pile within enclosure A. *Center:* Wall with what appear to be "sockets." *Bottom:* Wall viewed from top.



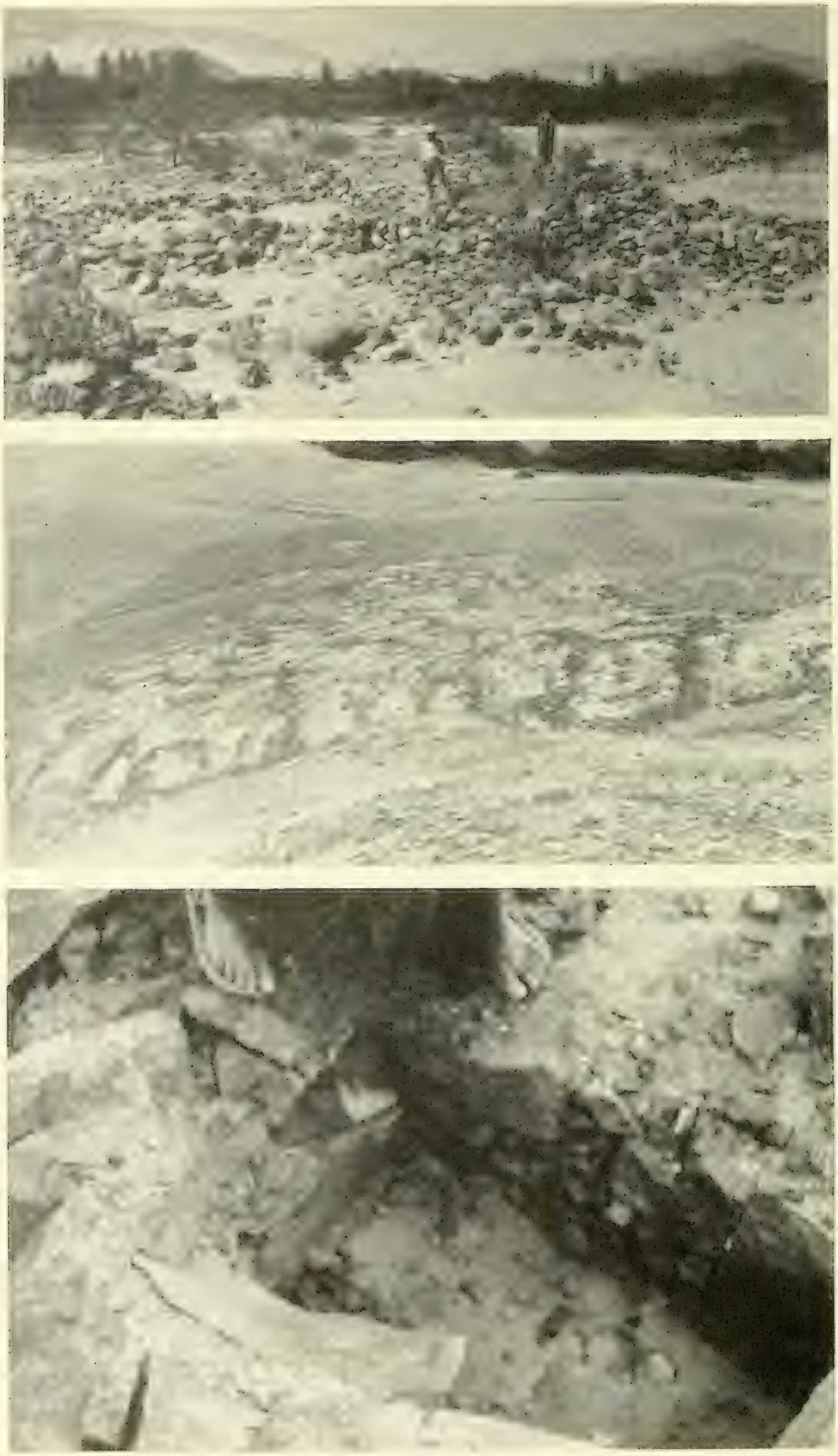
TAPIA AND RECTANGULAR ADOBE-WALLED SITES OF THE TOMAVAL PERIOD

Top: Small building at V–256. *Center:* Wall section of Great Rectangular Enclosure Compound V–246. *Bottom:* Wall detail at V–246 showing rectangular adobes superimposed over tapia base.



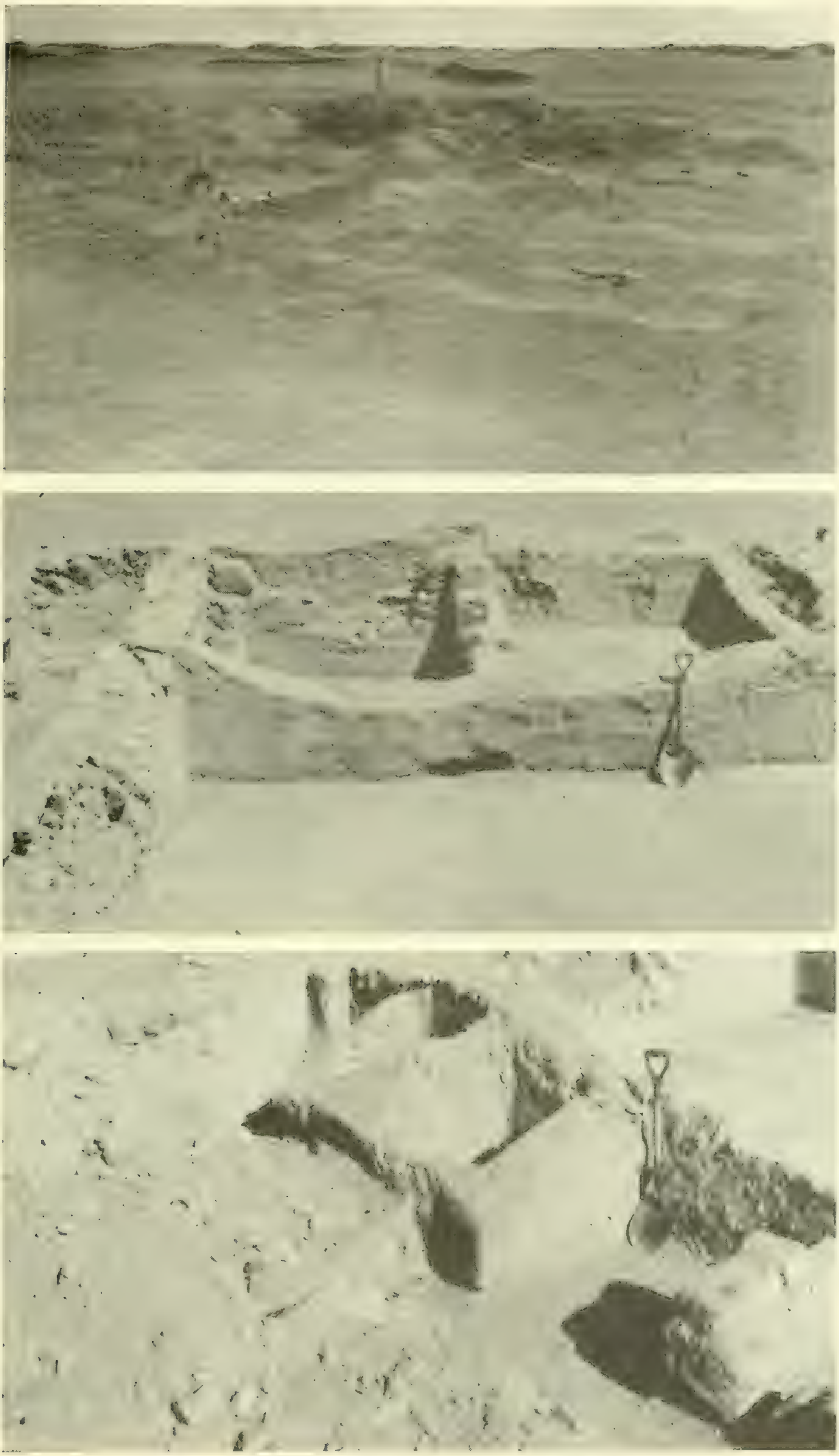
La Plata Period Sites

Top: Banquette feature in V–44. *Center:* Banquette in V–140. *Bottom:* Rock-lined "path" at east end of V–140.



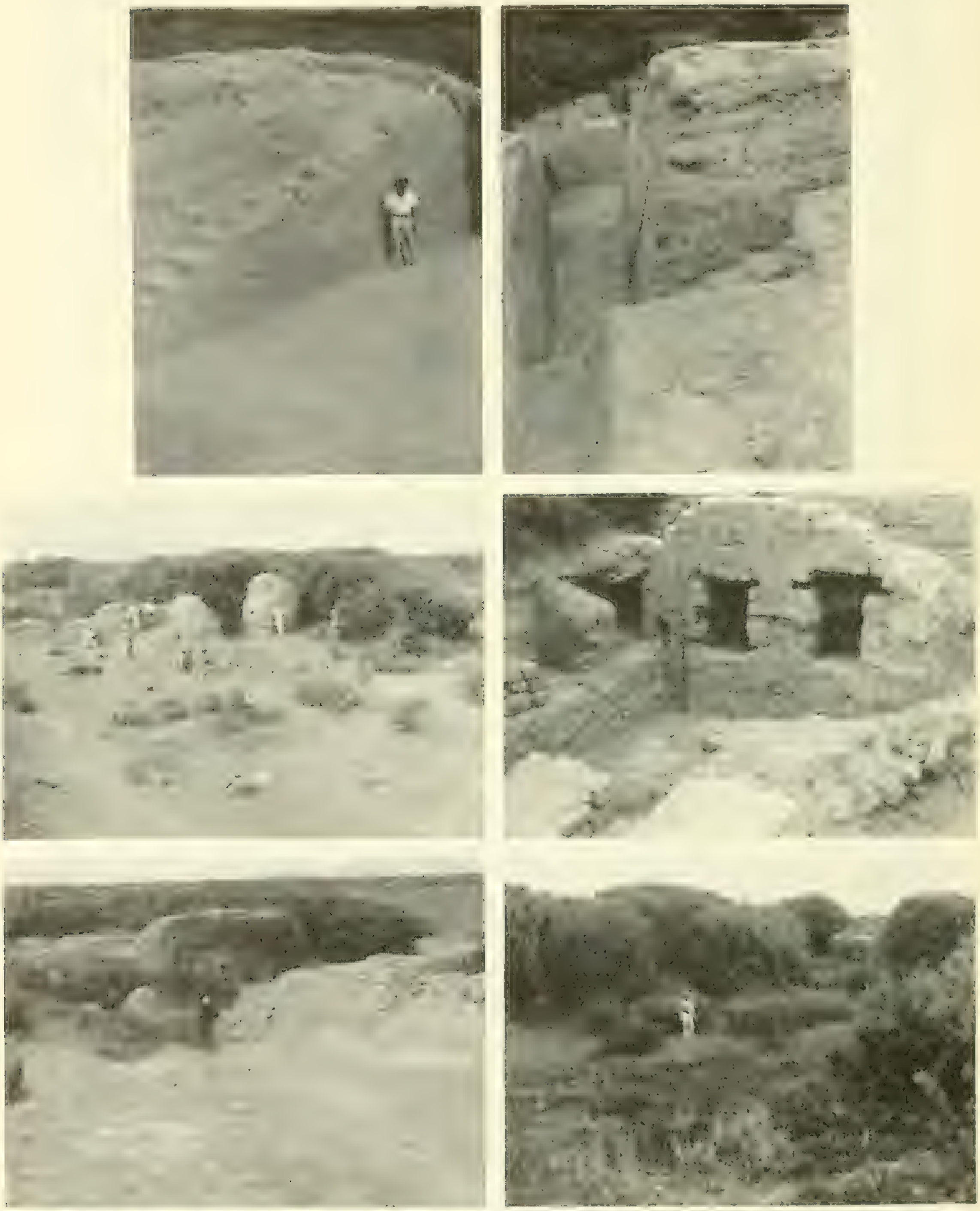
LA PLATA PERIOD SITES

Top: Site V–47 in lower Queneto quebrada. *Center:* Looking over V–145 (La Plata) and V–144 (Puerto Moorin). *Bottom:* Rectangular, stone-lined subfloor cist at V–145.



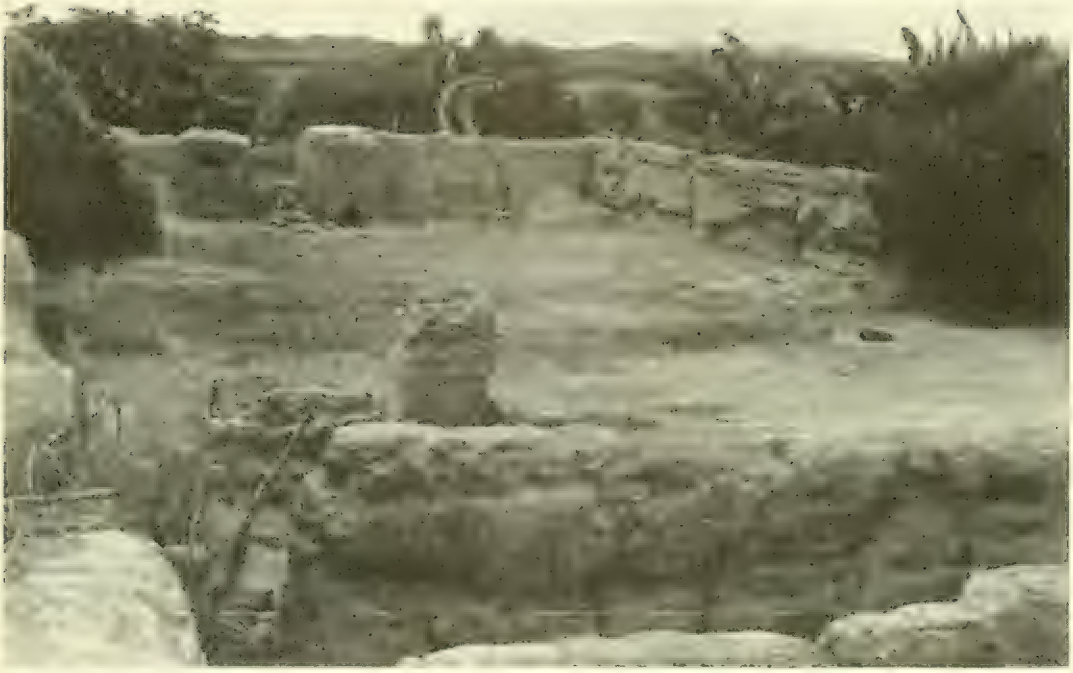
SITE V–108, LA PLATA PERIOD

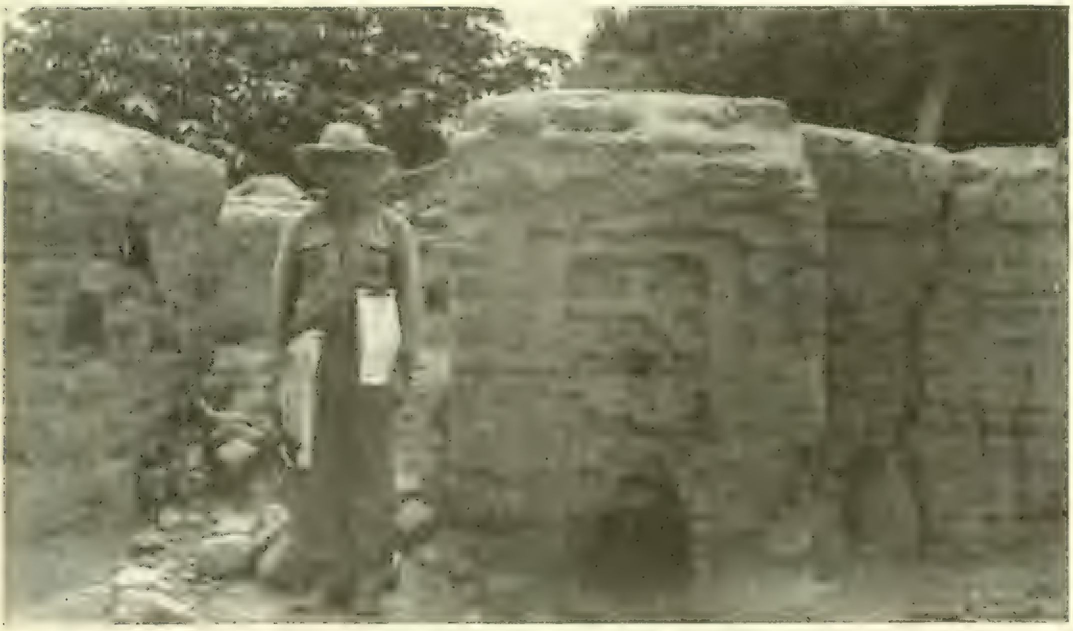
Top: View over site looking toward ocean. *Center:* Recently excavated rooms within compound. *Bottom:* Bins or closetlike rooms. (All photos courtesy Collier.)



SITE V–124, ESTERO PERIOD

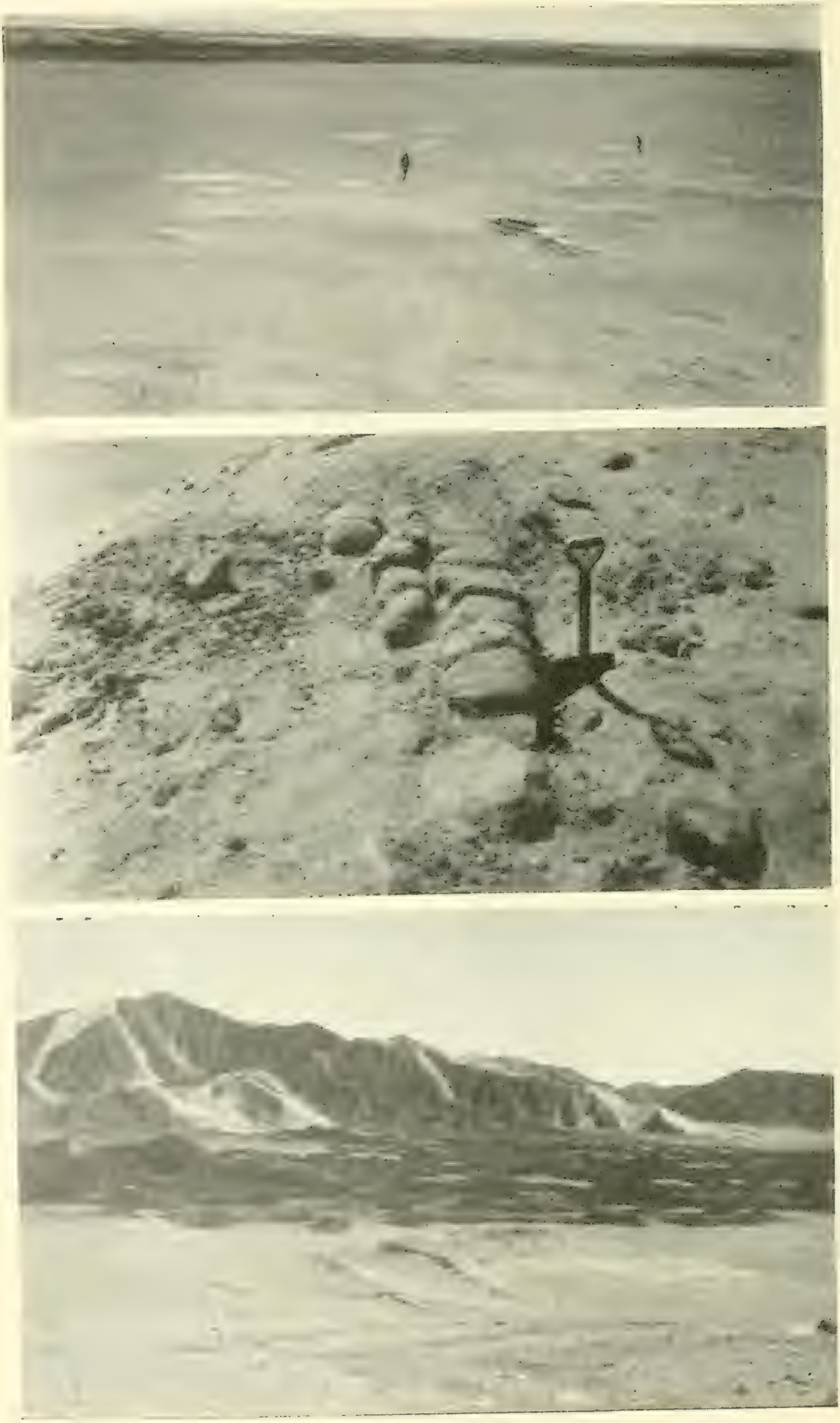
Top, left: Stairs leading to summit of platform or mound. *Top, right:* Another view of platform or block (note batter). *Center, left:* Main gate after clearing. *Center, right:* Room with wall niches after excavation (the stick against the wall is 2.00 meters high). *Bottom, left:* View over site. *Bottom, right:* The lagoon or reservoir at V–124. (All photos courtesy Collier.)





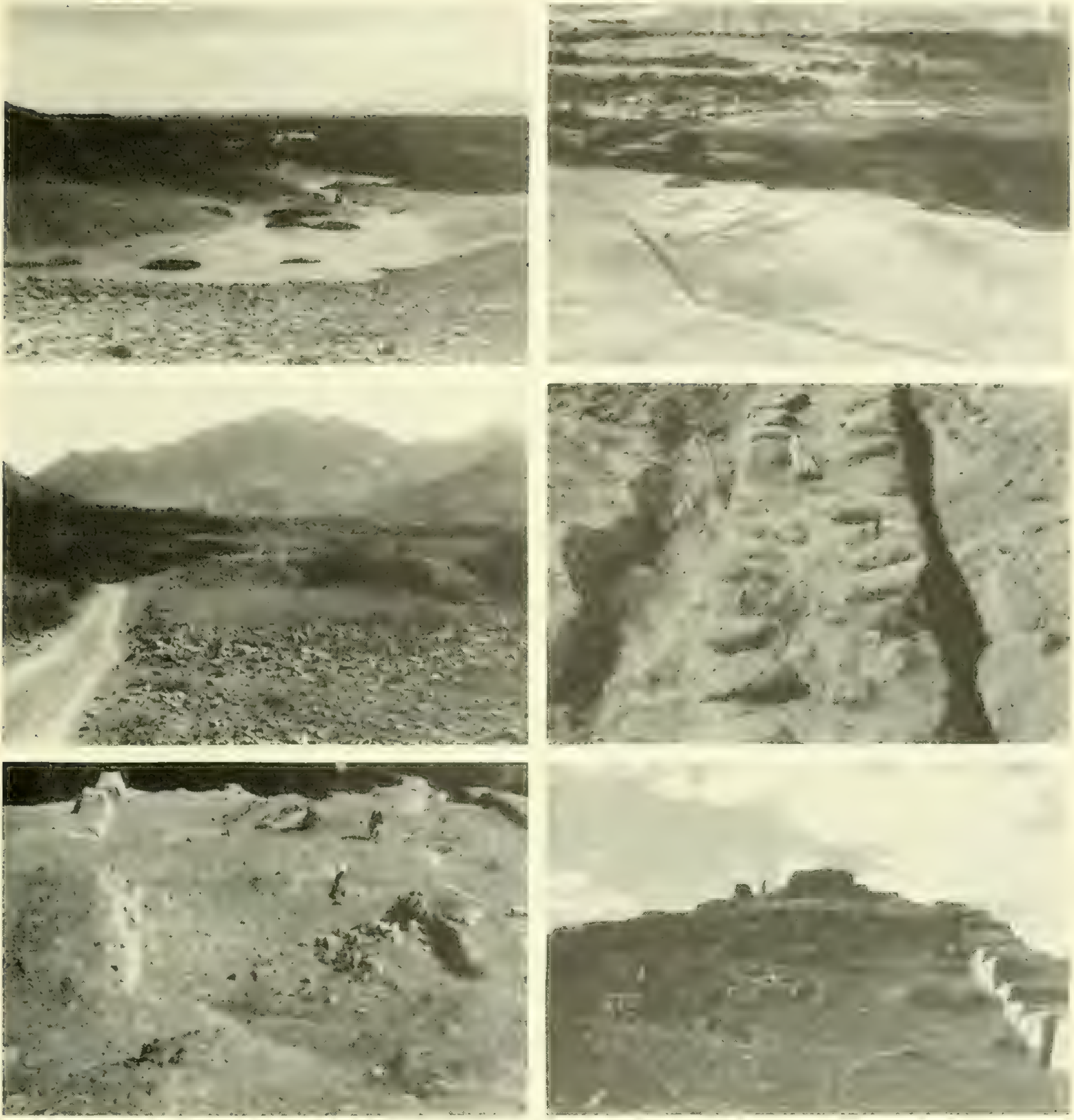
LA PLATA MIDDEN AND COMPOUND

Top: V–116 midden in beach country. *Center:* Looking over main courtyard of V–269. *Bottom:* Relief decorated "haunted" gateway at V–269.



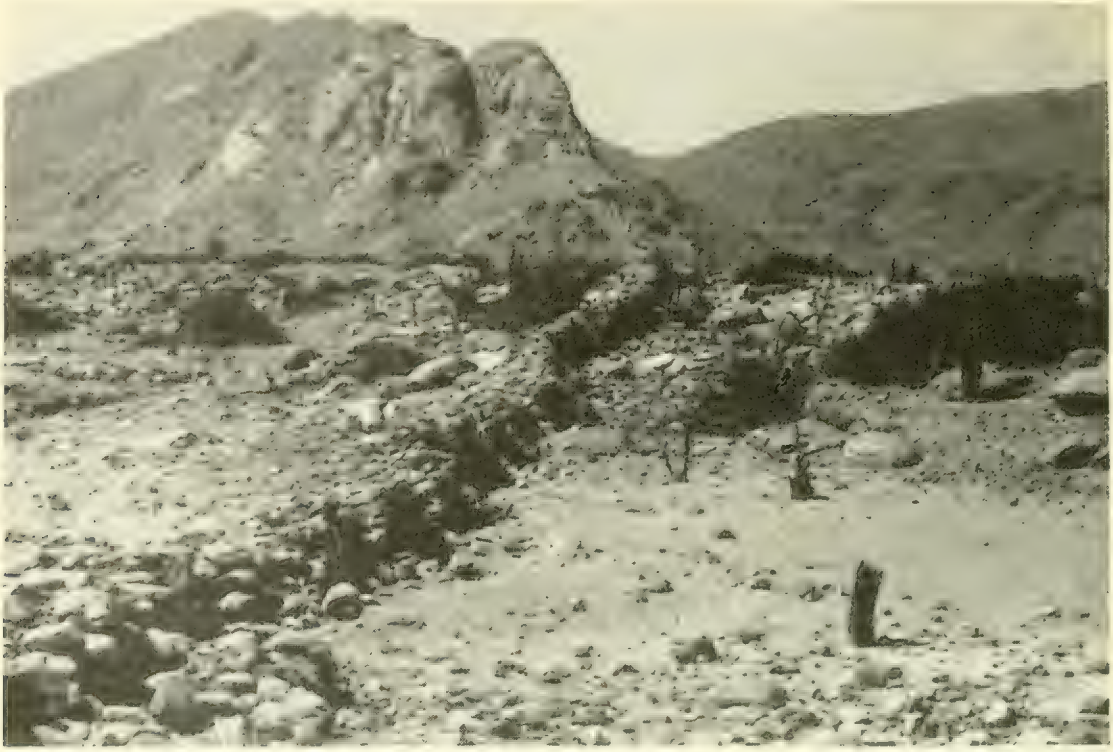
LA PLATA SITES

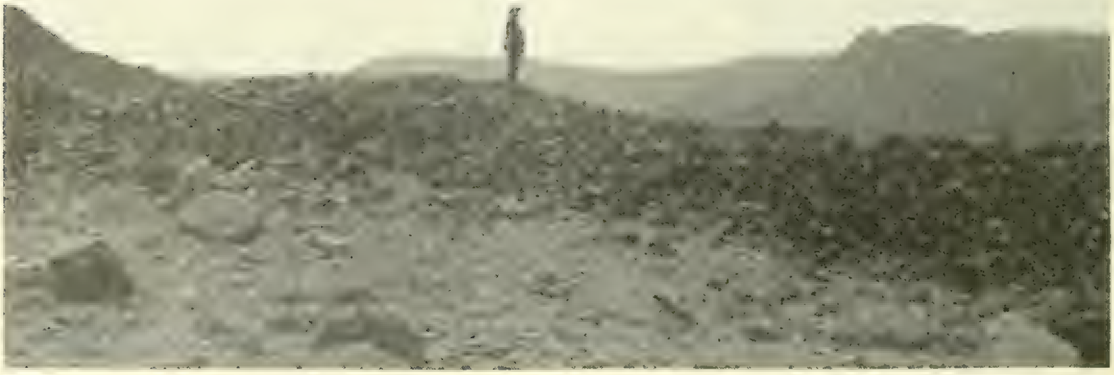
Top: Cultivation plots on the west side of V–106. *Center:* Adobe wall on summit of V–106. *Bottom:* Pyramid Mound within an adobe-walled compound (V–81), from hill slope above.

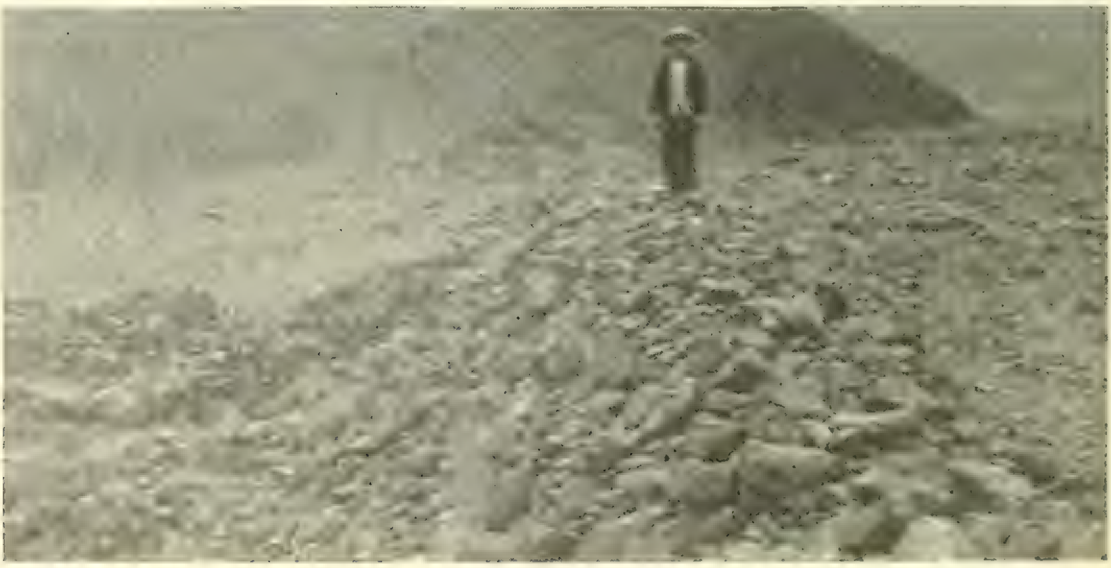


ARCHEOLOGICAL SITES AND FEATURES

Top, left: Line of main prehistoric canal, Lower Virú-South. *Top, right:* V–19 foundations and major wall from hills above. *Center, left:* V–206 mound (conical adobes and stone cover) on edge of old terrace. *Center, right:* Conical adobe wall at V–127. *Bottom, left:* Looking down slope over lower section of V–130. *Bottom, right:* Looking up slope over lower section of V–130.

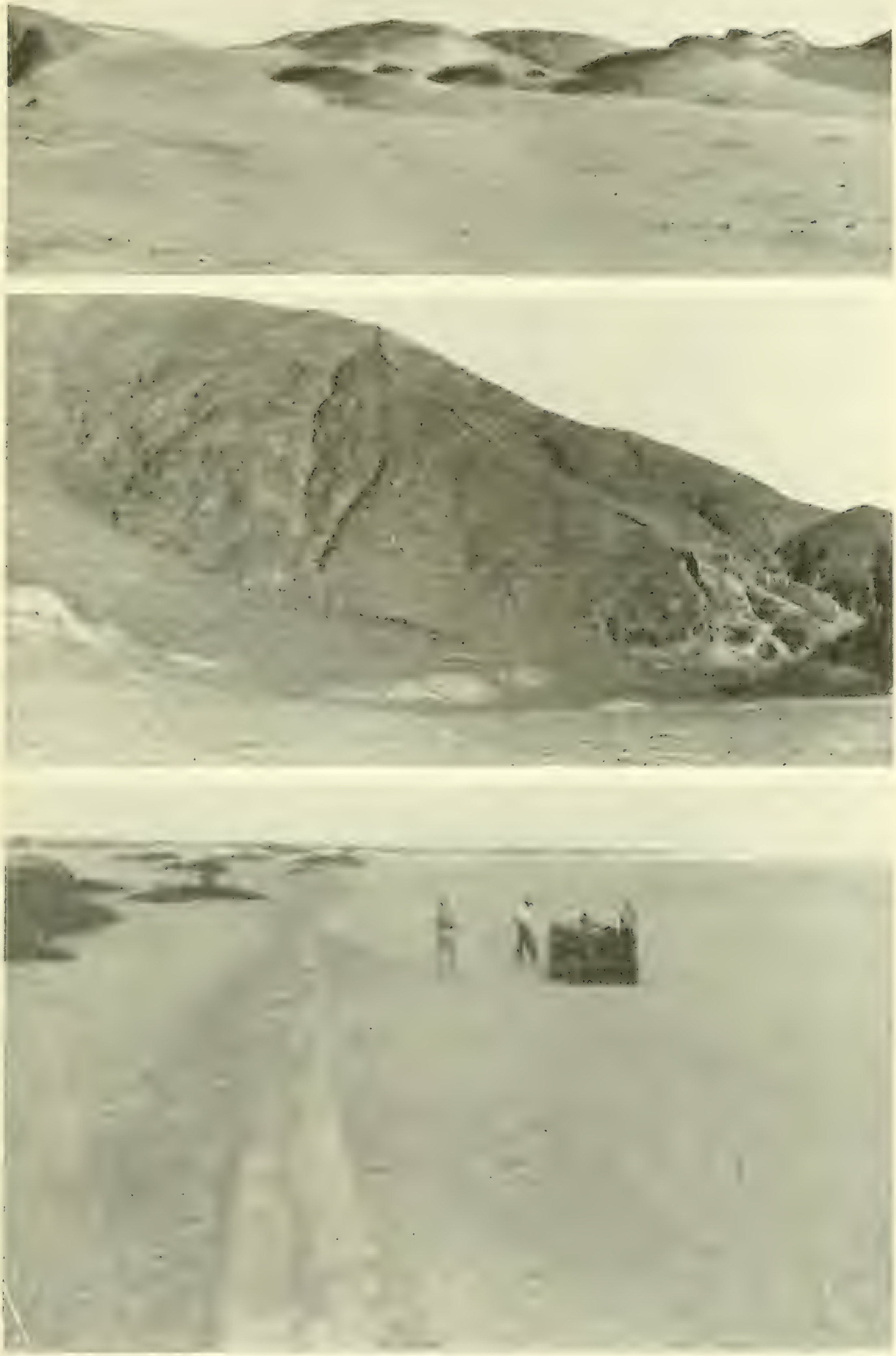






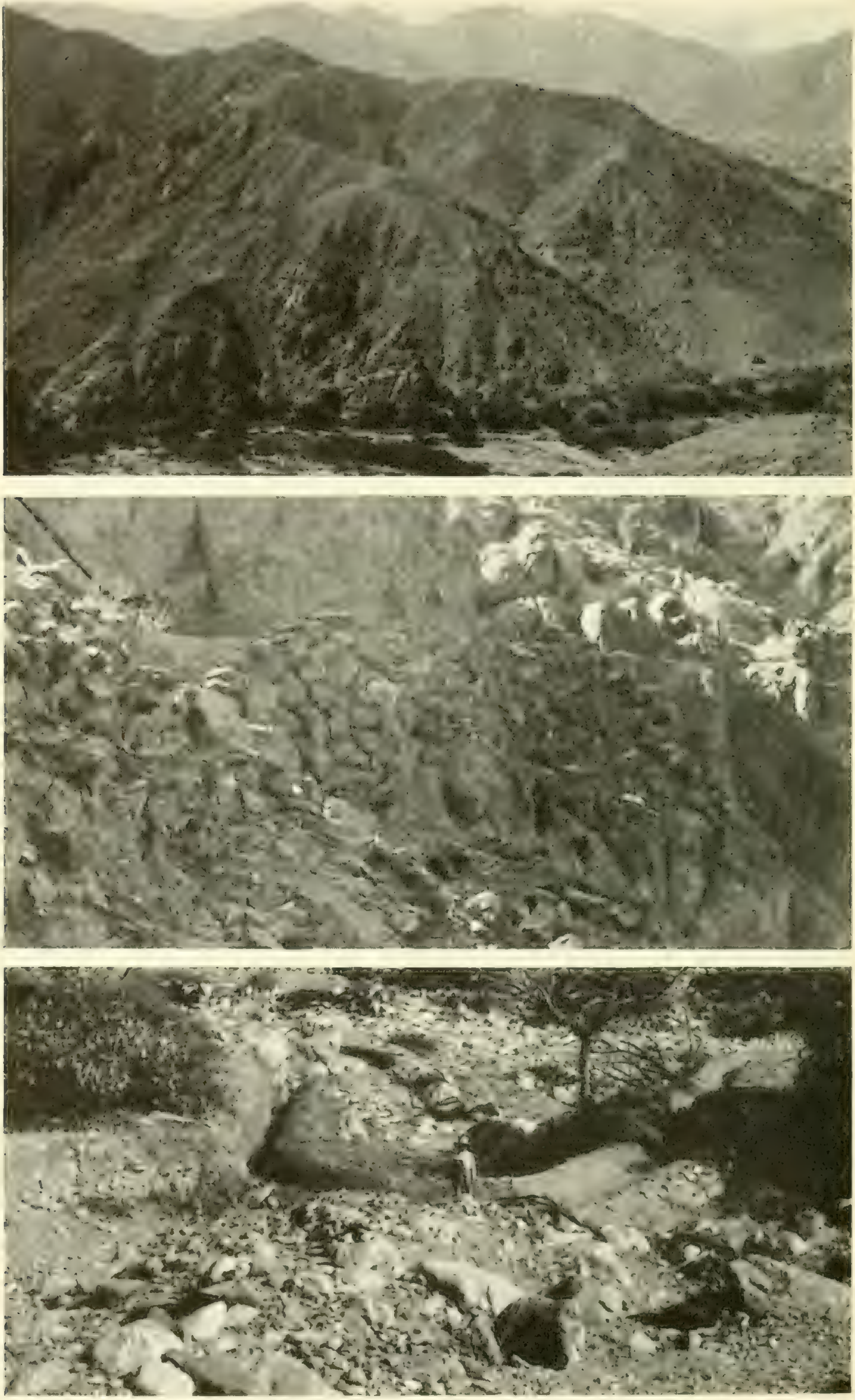
DEFENSE WALLS

Top: Looking along wall which is attached to mound V–198, Upper Huacapongo. *Center:* "Great wall" near V–147, Huacapongo-North. *Bottom:* Top view of same "great wall."



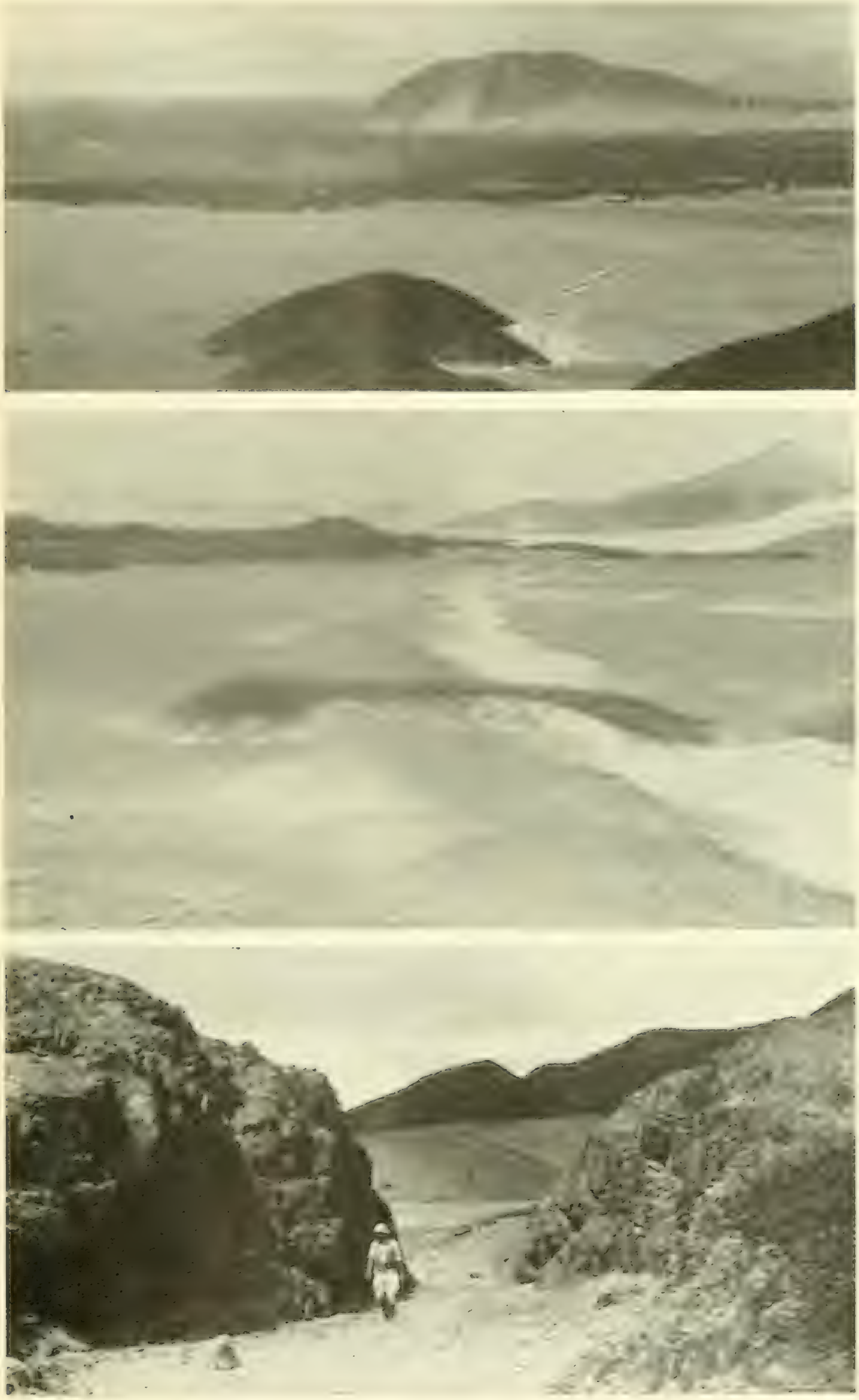
DEFENSE WALLS

Top: Adobe wall half-buried in the sands near V–91. *Center:* Wall extending up the mountain behind V–88–89 (note the stone foundation continues on to the crest although the adobe superstructure is gone). *Bottom:* Adobe wall running along north margin of Valley in Middle and Lower Virú-North.



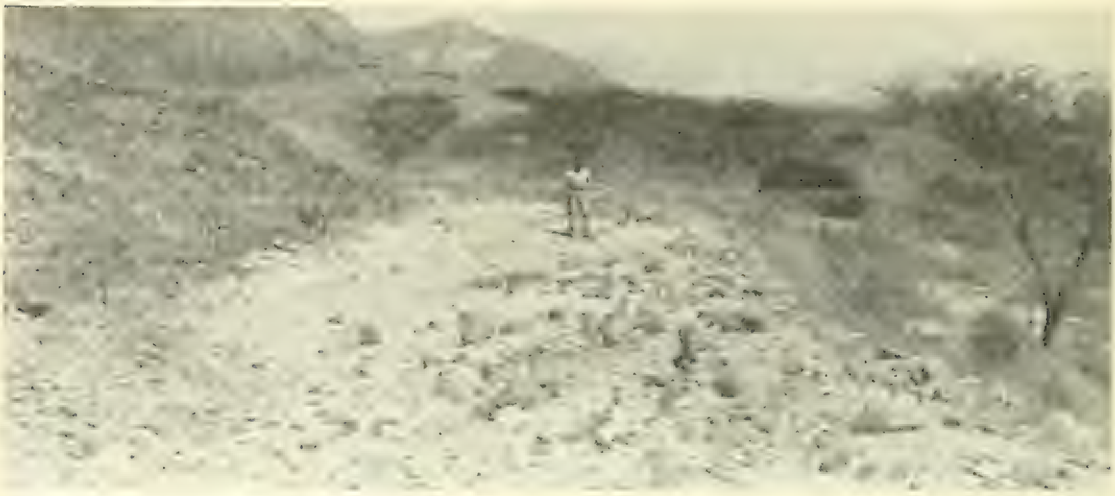
CANALS IN THE UPPER HUACAPONGO

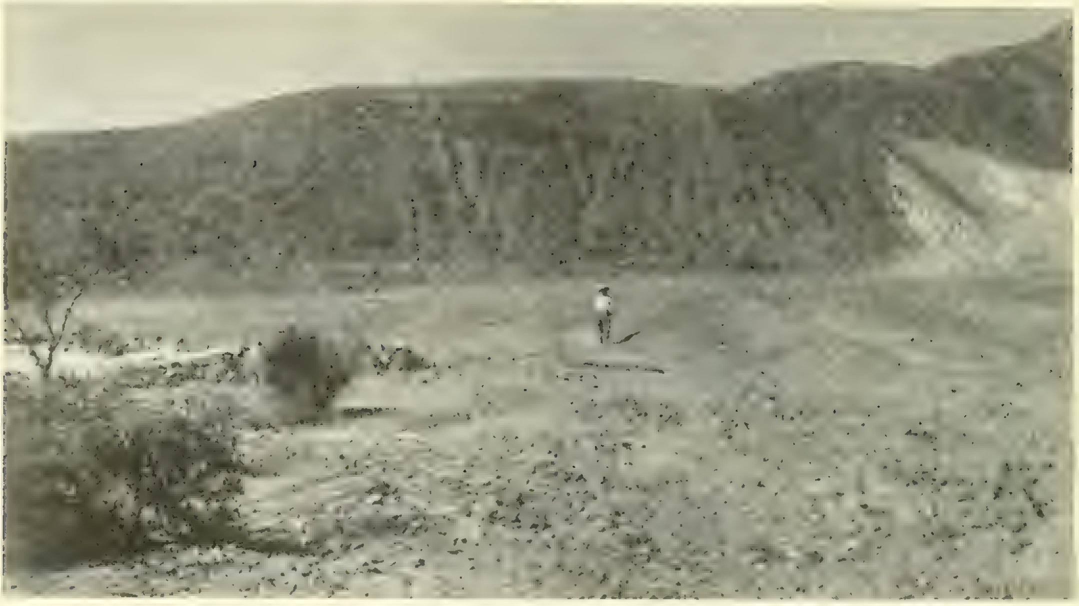
Top: Line of canal extending around hills on north side of Huacapongo near site V–180. *Center:* Close-up of same canal (with rock retaining wall). *Bottom:* Modern canal in Valley bottom in same general region of Huacapongo.

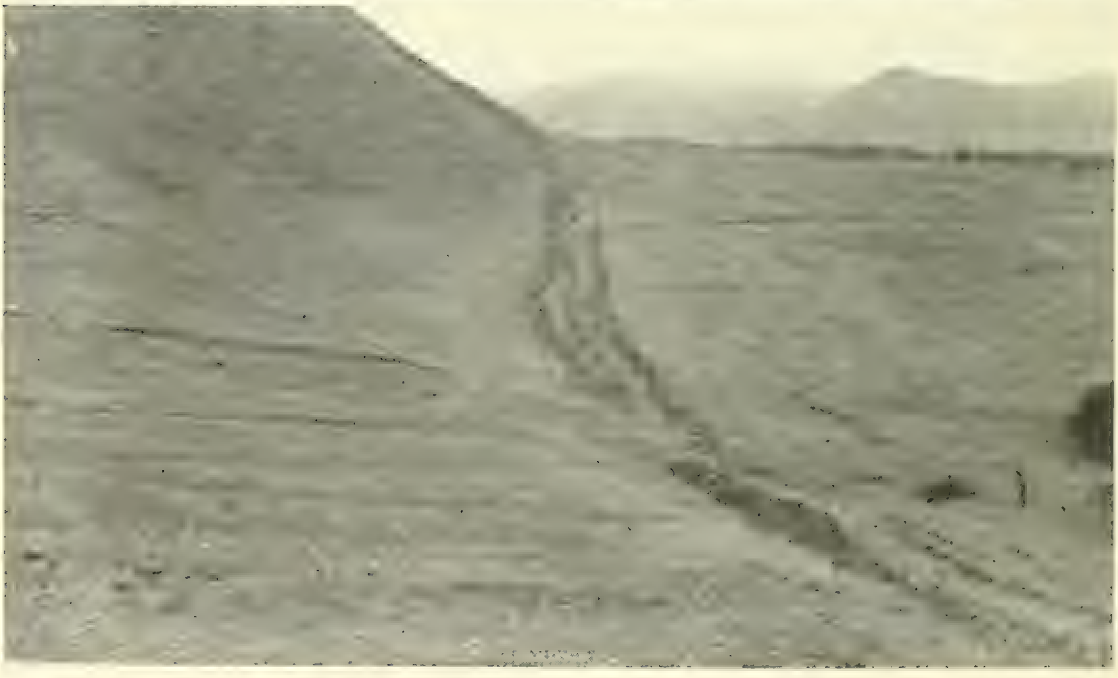


THE MAIN CANAL, LOWER VIRÚ-SOUTH

Top: Canal, at a distance, in desert between Huancaco and Cerro Bitín. *Center:* Canal observed on ground in same region (looking up Valley). *Bottom:* Part natural, part artificial canal pass through rocky spur just above Huancaco. (Bottom photo courtesy Evans.)

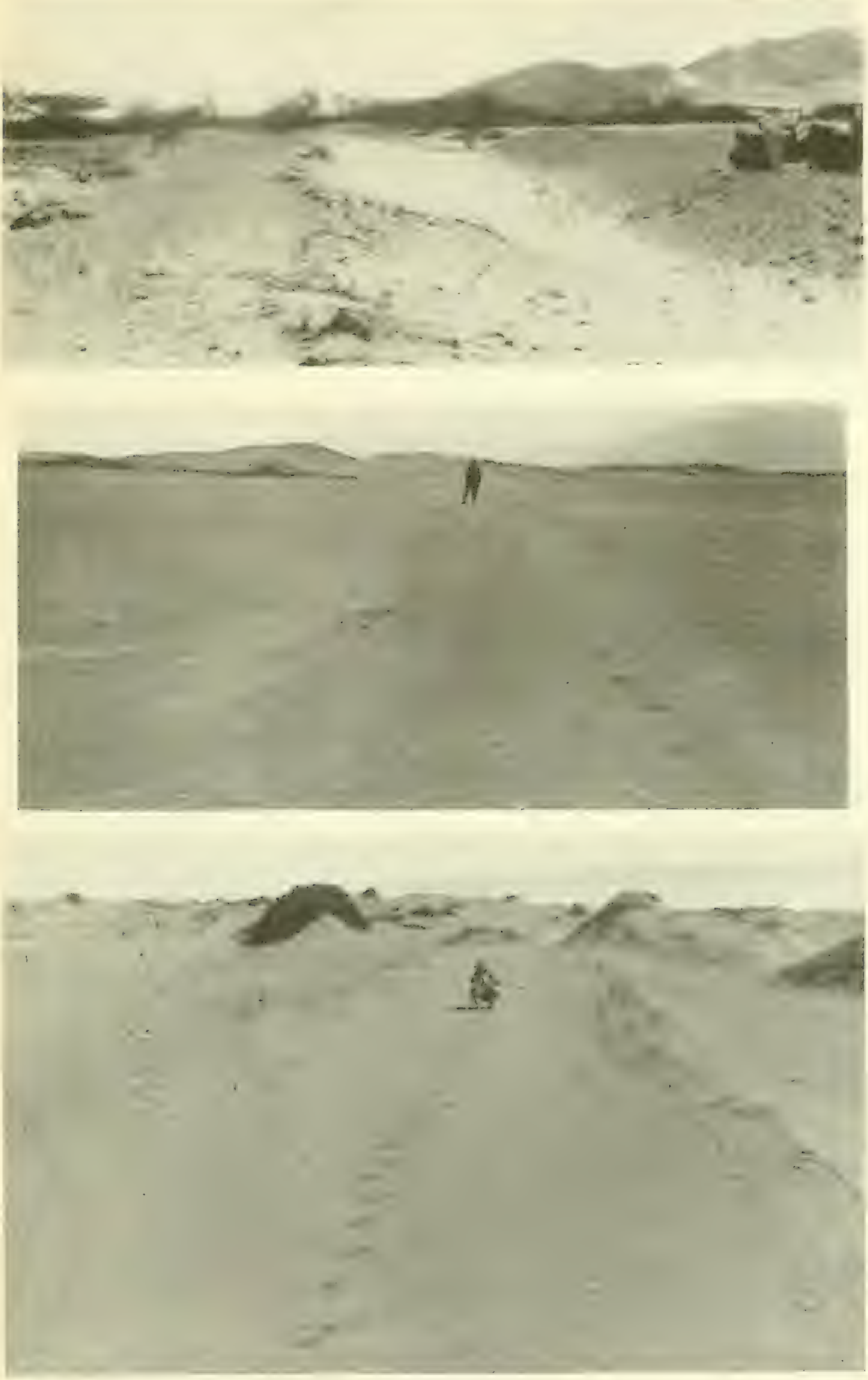






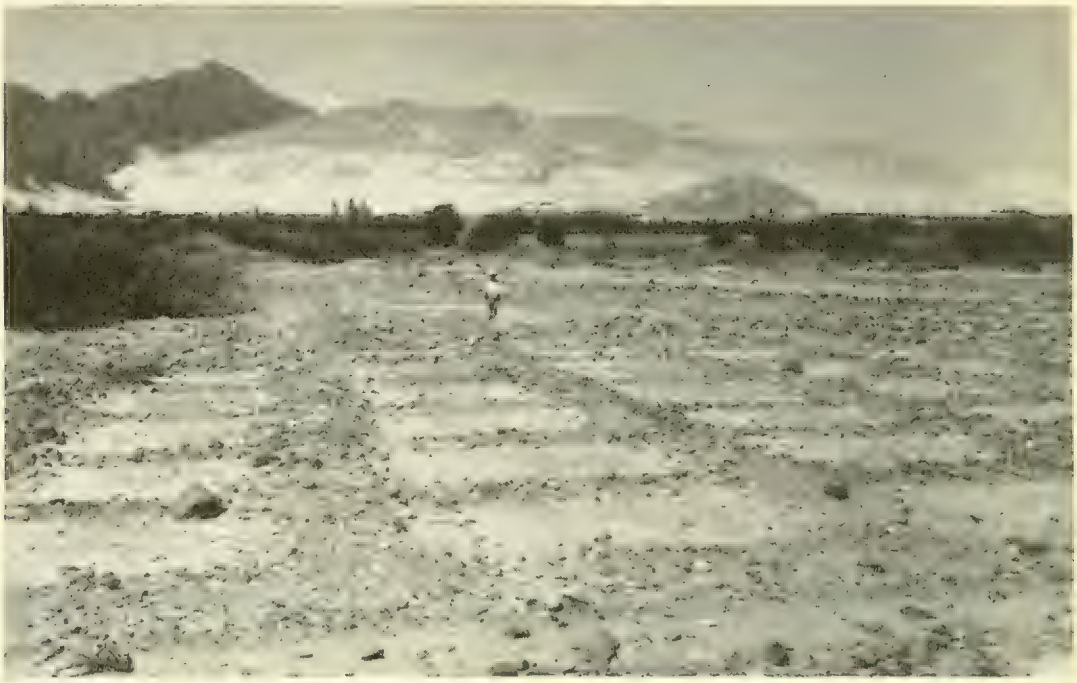
VIRÚ CANALS

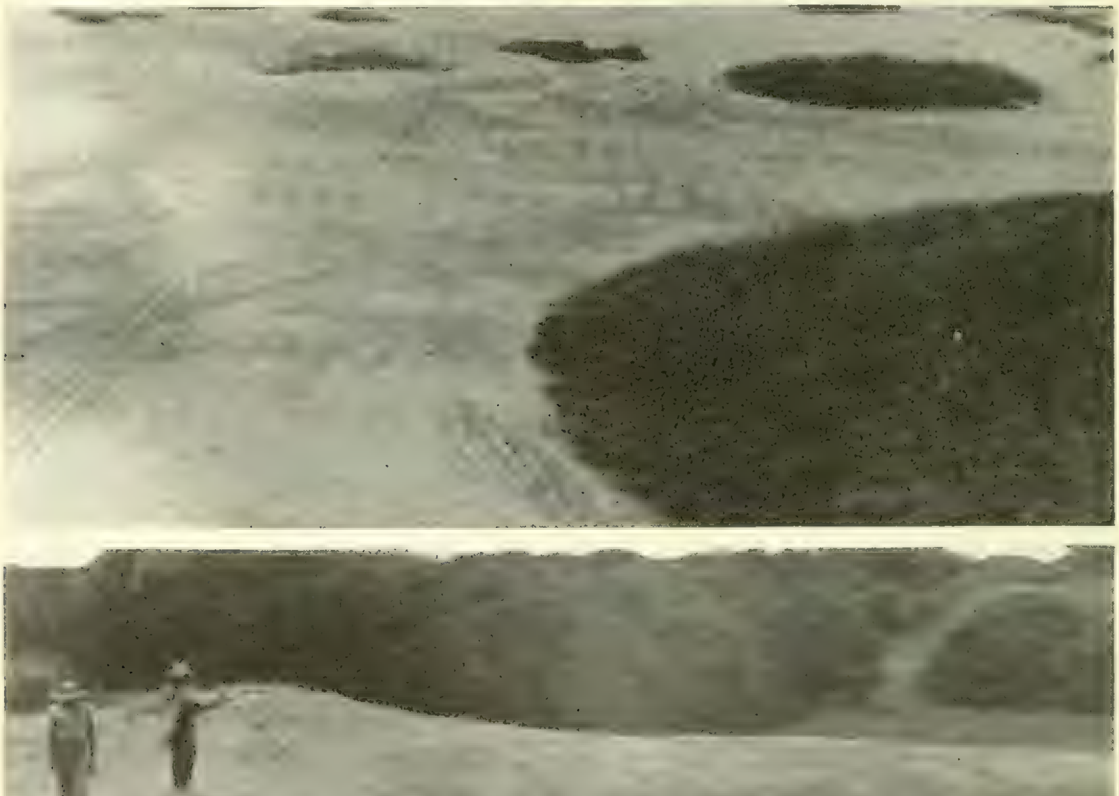
Top: Old canal bed just below V–76, at the southwest foot of Sarraque. *Center:* Series of old canal beds crossing the mouth of Queneto quebrada (man standing in one). *Bottom:* Looking up Valley at the upper main canal line crossing the quebrada mouths of Huacapongo-North.



VIRÚ CANALS

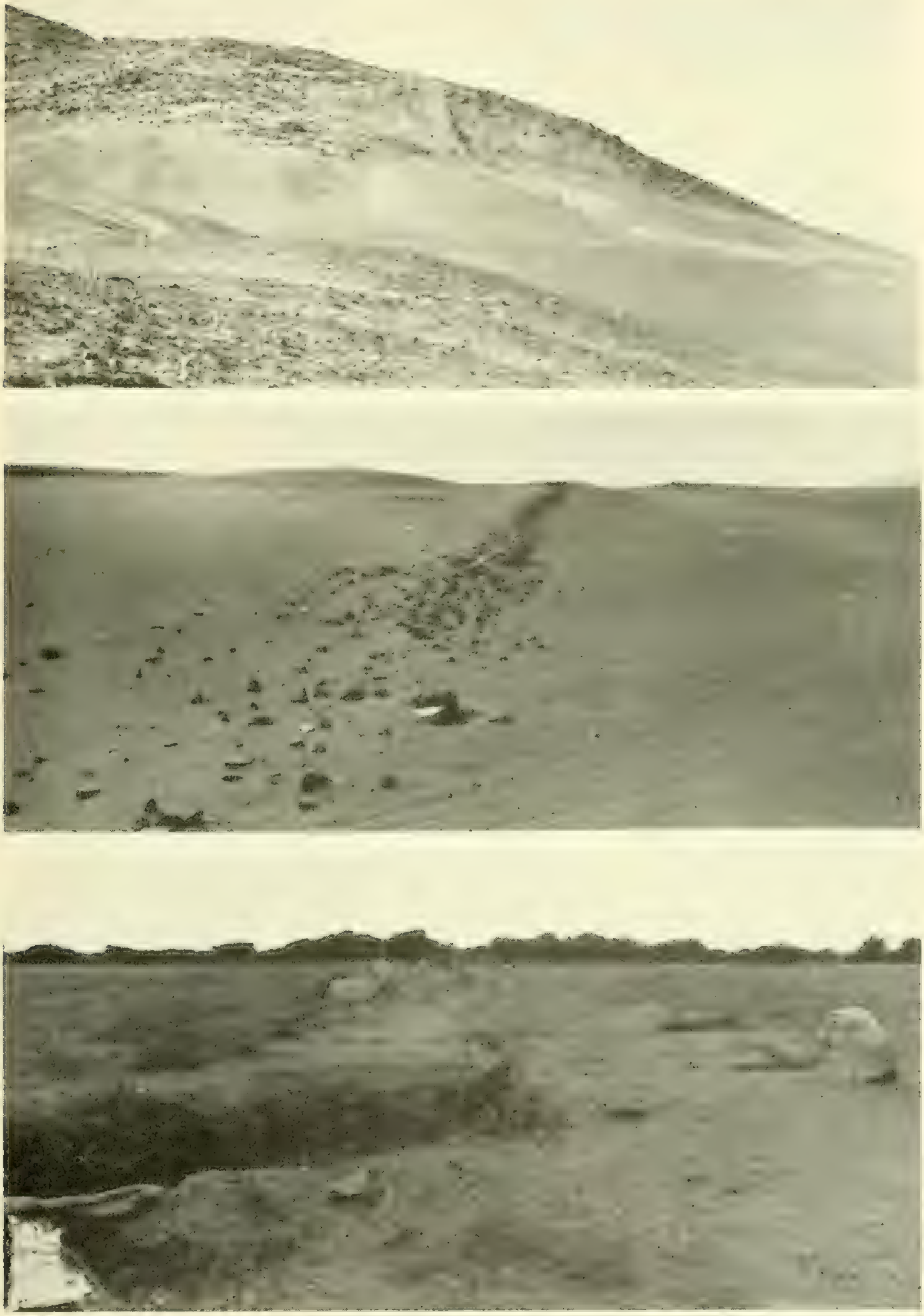
Top: Old main canal in Middle Virú-North near site V–10. *Center:* Major canal in area of V–106. *Bottom:* Major canal running toward the sea in the Gallinazo Group area near V–155.





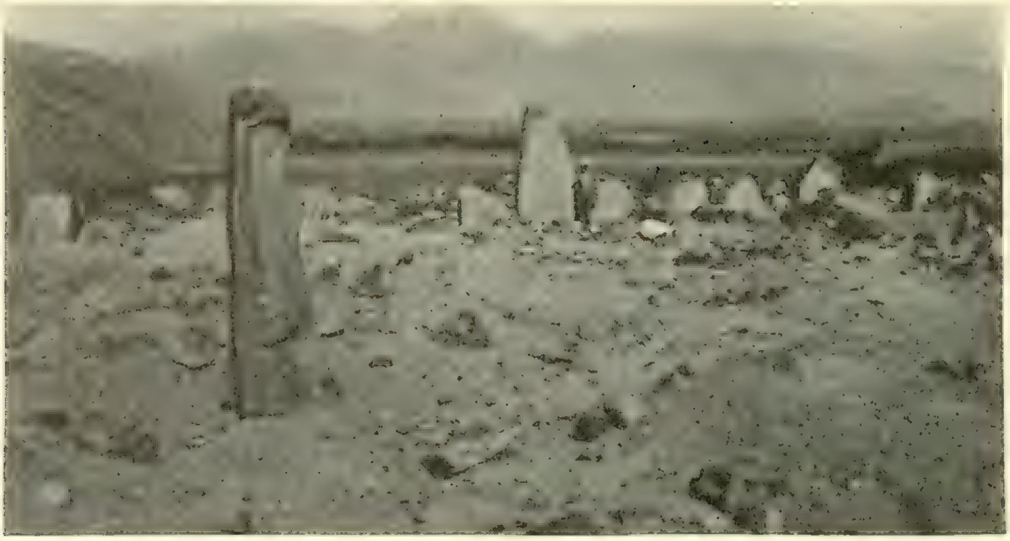
CULTIVATION WORKS IN VIRÚ

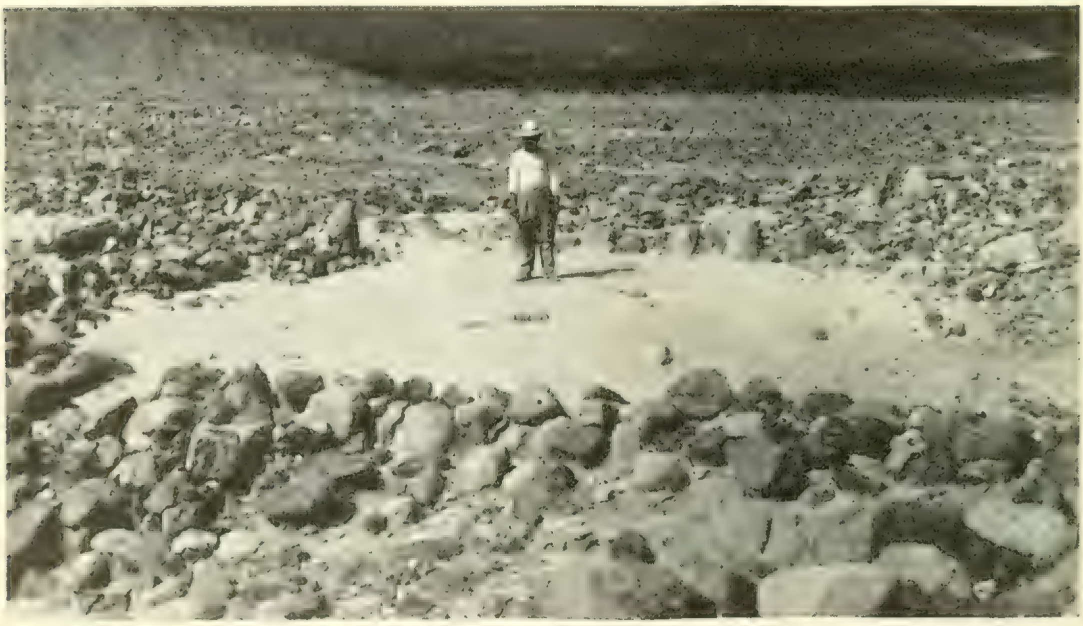
Top: Rectangular plots in lower Queneto quebrada. *Center:* Plots in soil on southwest side of Huaca Gallinazo (V–59). *Bottom:* "*Pukio*" cribs at V–286, Lower Virú-North (the men are walking on one of the separating ridges). (Center photo courtesy Strong and Evans.)

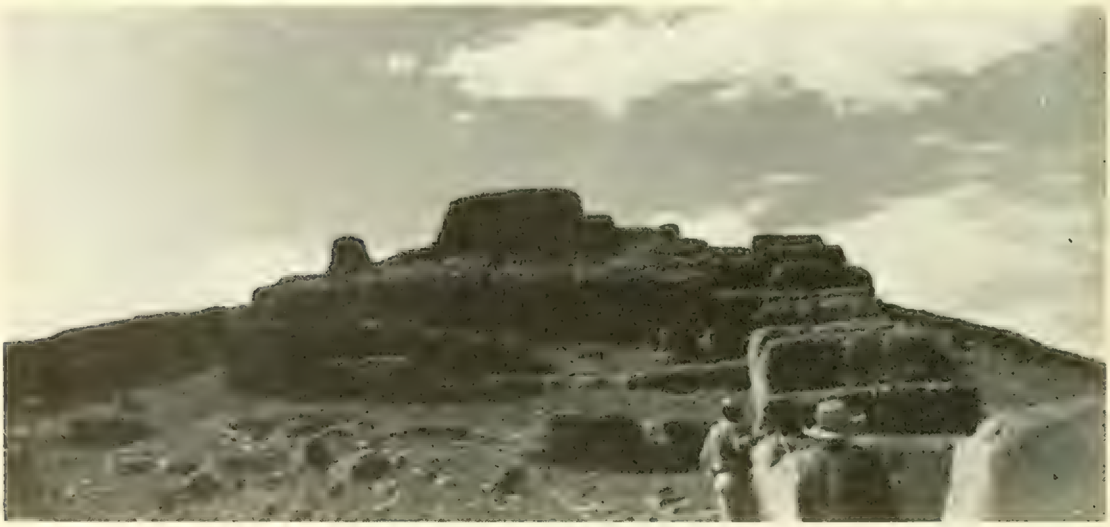


Virú Ancient Roads

Top: Steep road leading up face of hill to site V–79. *Center:* The trans-Valley road outlined with the remnants of stone walls near V–117 in Lower Virú-South. *Bottom:* the trans-Valley road outlined with tapia adobe walls near V–288 in Lower Virú-North.

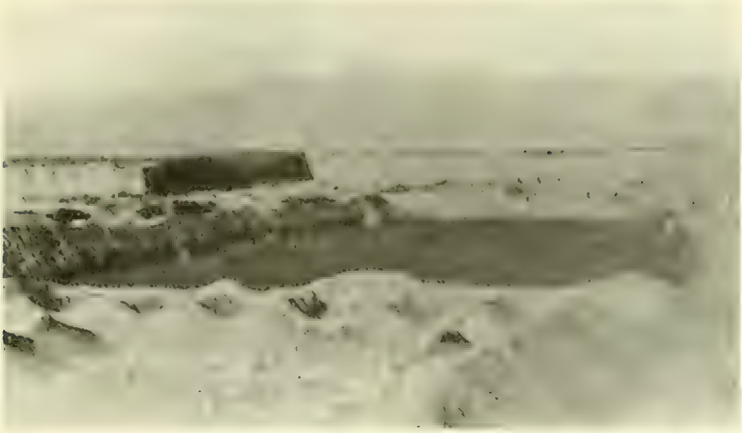


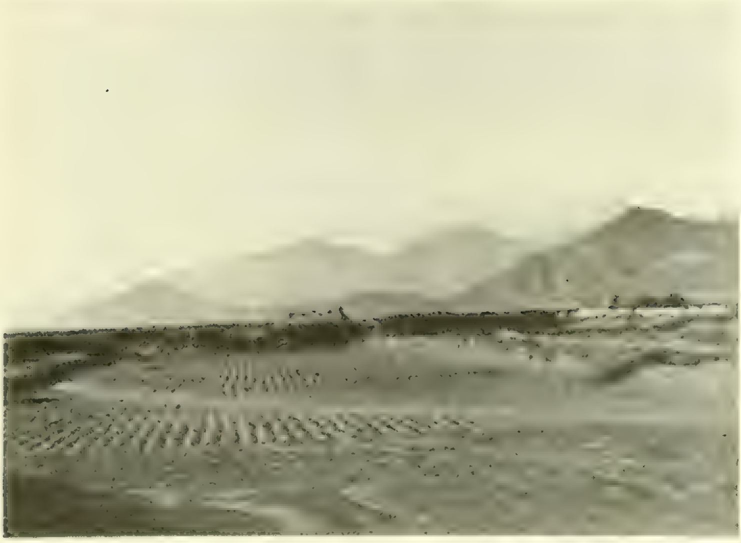


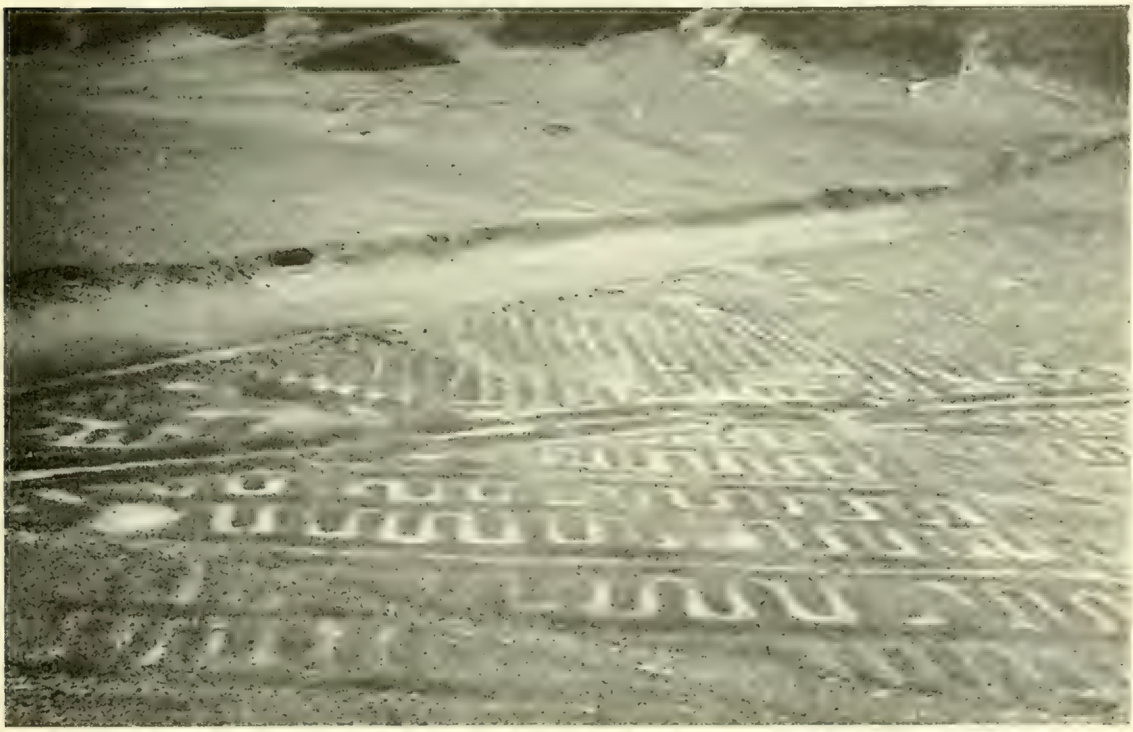


VARIOUS SITES IN VIRÚ

Top: Queneto temple (V–17), looking across the large upper plaza (B). *Center:* Site V–56 in Queneto quebrada. *Bottom:* The adobe-walled compound V–130, from below.

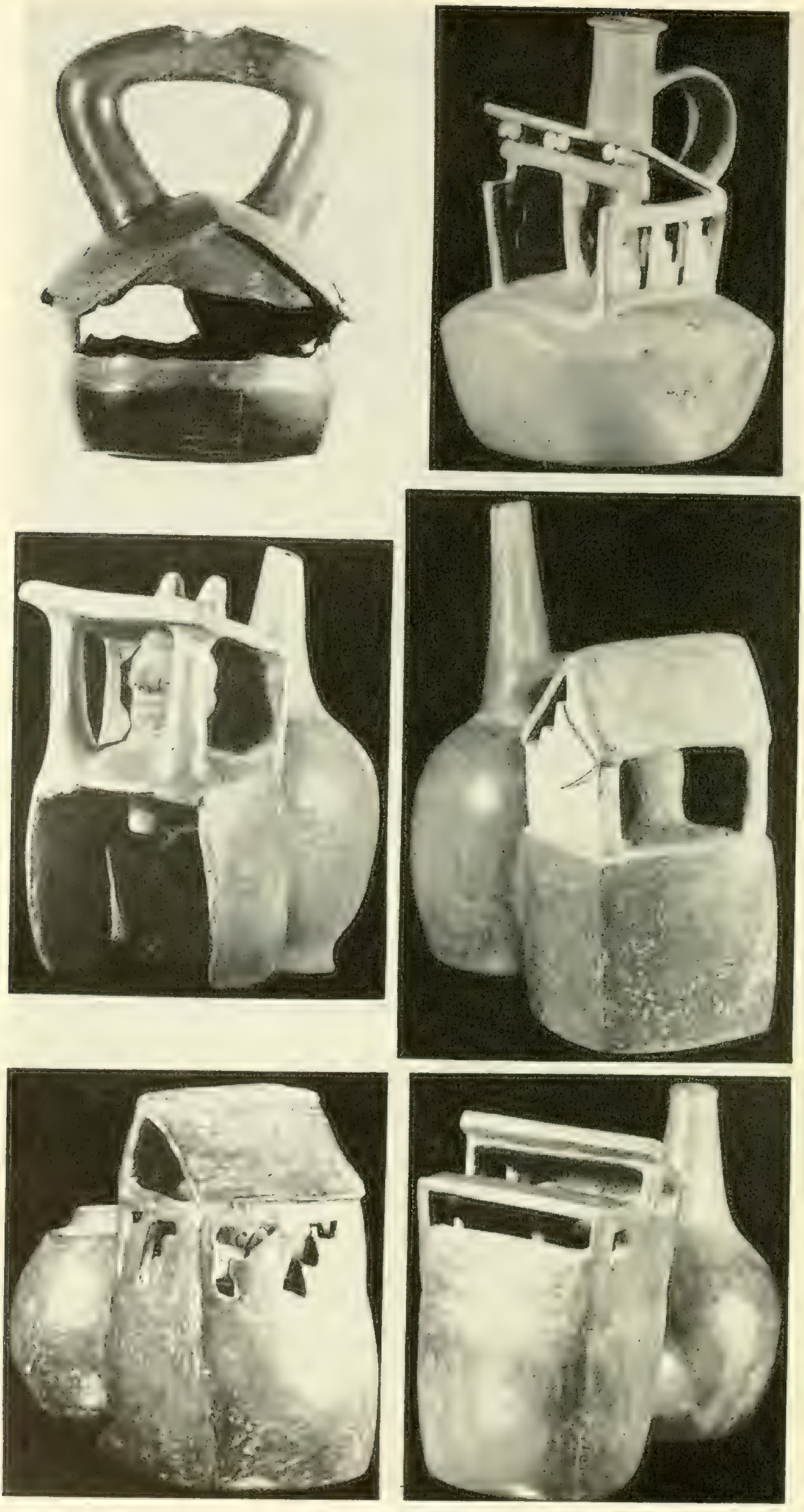






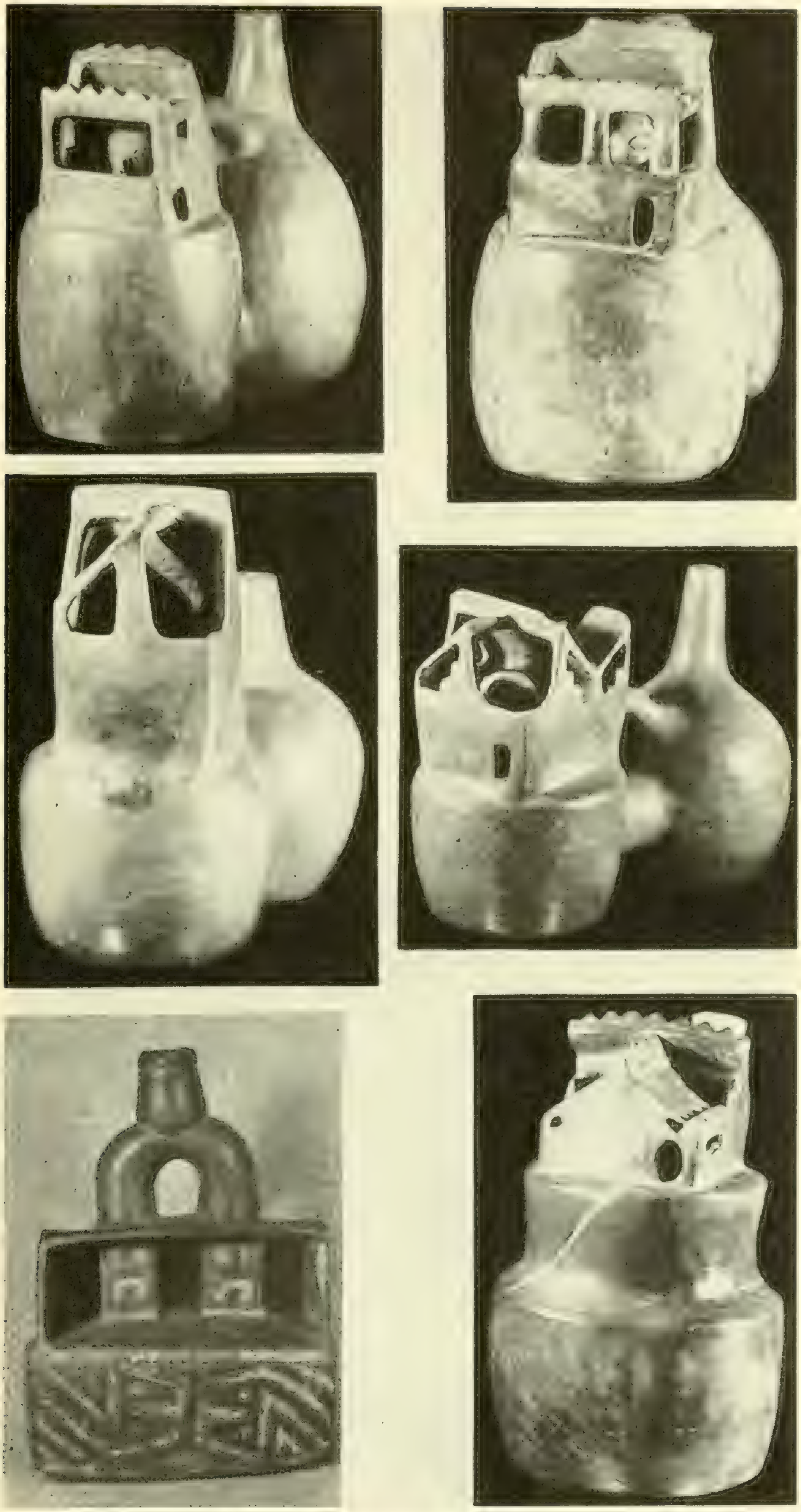
PREHISTORIC LAGOONS AND CULTIVATION PLOTS OUTSIDE OF VIRÚ

Top: Lagoon or "*pukio*"-type basin in Chanchan, Moche Valley. *Center:* Cultivation plots in walled area, Chanchan. *Bottom:* Cultivation plots in the Santa Valley. (Top and center photos courtesy Evans; bottom, courtesy R. Larco Hoyle.)



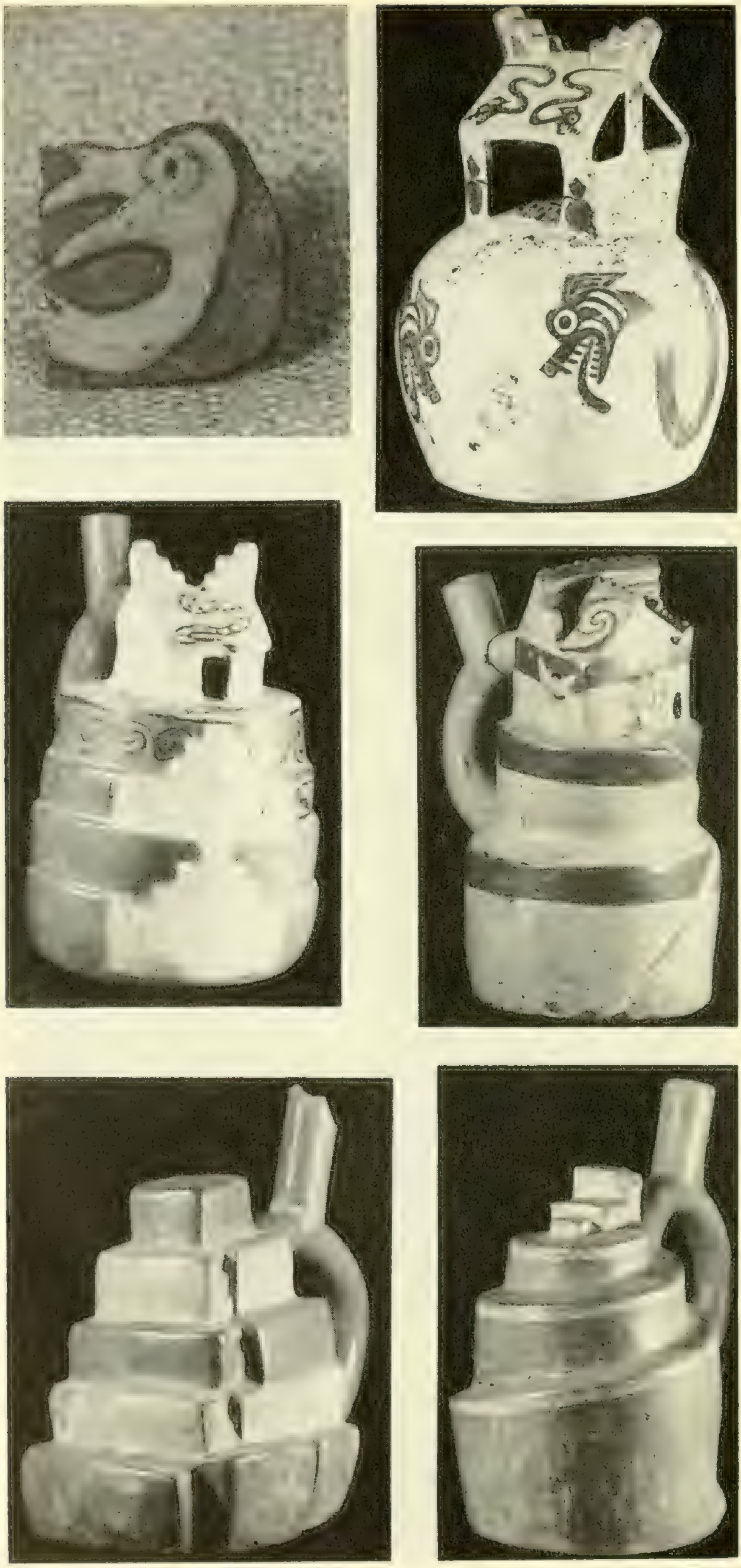
CUPISNIQUE, SALINAR, AND GALLINAZO (NEGATIVE) HOUSE REPRESENTATIONS IN CERAMICS

Cupisnique (*top, left*) and Salinar (*top, right*) specimens from Chicama; all Gallinazo specimens from Virú. (All photos courtesy R. Larco Hoyle.)



Gallinazo Period Building Representations in Ceramics

Provenience of *bottom, left,* specimen unknown but probably Virú Valley; all others from Virú. (Bottom, left, courtesy Peabody Museum, Harvard University—Cat. No. 46-77-30/4912; all others courtesy R. Larco Hoyle.)



MOCHICA STRUCTURAL REPRESENTATIONS IN CERAMICS AND ADDITIONAL POTSHERD

Top, left: Potsherd from between adobes of V–75 wall; all others probably from Chicama Valley. (All except top, left, courtesy R. Larco Hoyle.)

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